

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

ALLAIRE et al.

U.S. Serial No. 09/673922  
U.S. filing date: 22 April 2000

(A National filing from PCT/US99/08870  
Int. filing date: 22 April 1999  
Priority date: 22 April 1998  
WO 99/53974  
Int. Publication date 28 October 1999)

For: HYBRID MAGNETICALLY  
SUSPENDED AND ROTATED  
CENTRIFUGAL PUMPING  
APPARATUS AND METHOD

PETITION UNDER 37 C.F.R. § 1.48(a)

Box PCT  
Assistant Commissioner of Patents  
Washington, D.C. 20231

Sir:

Applicants hereby petition the Assistant Commissioner to correct an error that occurred without deceptive intent and relates to the inventorship of the above-identified application by adding Jeffrey Decker and Michael Baloh to the co-inventors and removing M. Mary Sinnott as a co-inventor listed in the above-identified patent application, for the reasons set forth below.

In accordance with 37 C.F.R. § 1.48(a), a check in the amount of \$130.00 is enclosed as prescribed in 37 C.F.R. § 1.17(i). Please charge Deposit Account No. 08-2623 for any additional fees that may be required for consideration of this petition. One additional copy of this petition, without attachments, is attached.

03/24/2001 MKAYPAGH 00000036 09673922

02 FC:122

130.00 0P

## FACTS DEMONSTRATING THE ERROR

1. On May 2, 1997, United States Patent Application No. 08/850,598 (now U.S. Patent No. 6,074,180) was filed on behalf of Pratap S. Khanwilkar, Paul E. Allarie, Gill B. Bearnson, Don B. Olsen, Eric H. Maslen, and James W. Long, Jr.

2. On February 20, 1998, a declaration by the above inventors was filed in response to a Notice to file Missing Parts mailed in above-mentioned United States Patent Application No. 08/850,598, a copy of which declaration is attached to this petition as Exhibit A.

3. On April 22, 1998, United States Patent Application No. 09/064,352 (now abandoned) was filed as a continuation-in-part of above-mentioned United States Patent Application No. 08/850,598.

The inventors named in Application No. 09/064,352 were Pratap S. Khanwilkar, Paul E. Allarie, Gill B. Bearnson, Don B. Olsen, James W. Long, Jr., Ron Flack, B. Ajit Kumar, and M. Mary Sinnott.

4. On September 30, 1998, a declaration by the above named inventors was filed in response to a Notice to File Missing Parts mailed in above-mentioned United States Patent Application No. 09/064,352, a copy of which declaration is attached to this petition as Exhibit B.

5. On April 22, 1999, a copy of United States Patent Application No. 09/064,352 was filed as an International Application under the Patent Cooperation Treaty.

This PCT Application was designated International Application No. PCT/US/08870.

Box IX of the Request filed in International Application No. PCT/US99/08870 named Pratap S. Khanwilkar, Paul E. Allarie, Gill B. Bearnson, Don B. Olsen, James W. Long, Jr., Ron Flack, B. Ajit Kumar, Jeffery Decker and Michael Baloh as inventors, a copy of Box IX of the said Request is attached to this petition as Exhibit C.

6. M. Mary Sinnott was not named as an inventor in International Application No. PCT/US99/08870 because, on further review of the application, it was concluded M. May Sinnott did not contribute to the claimed invention.

7. On October 20, 2000, United States Patent Application No. 09/673,922 was filed as a National filing out of above-mentioned International Application No. PCT/US99/08870.

Included with the filing of United States Patent Application No. 09/673,922 was a copy of the declaration originally filed in above-mentioned United States Patent Application No. 09/064,352, a copy of which declaration is attached to this petition as Exhibit B.

As stated above, this declaration named Pratap S. Khanwilkar, Paul E. Allarie, Gill B. Bearnson, Don B. Olsen, James W. Long, Jr., Ron Flack, B. Ajit Kumar, and M. Mary Sinnott as co-inventors.

The transmitted International Application No. PCT/US99/08870 named Pratap S. Khanwilkar, Paul E. Allarie, Gill B. Bearnson, Don B. Olsen, James W. Long, Jr., Ron Flack, B. Ajit Kumar, Jeffrey Decker and Michael Baloh as co-inventors.

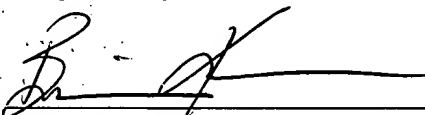
As is clear from the above and the associated declarations, the exclusion of Jeffery Decker and Michael Baloh as inventors in the declaration filed in above-mentioned United States Patent Application No. 09/673,922, (i.e. a copy of the declaration filed in above-mentioned United States Patent Application No. 09/064,352, Exhibit B) was a clerical error that occurred without deceptive intent. Further, the inclusion of M. Mary Sinnott as an inventor was a clerical error that also occurred without deceptive intent.

Therefore, it is respectfully requested that this petition be granted and that Jeffery Decker and Michael Baloh be added as inventors and M. Mary Sinnott be removed as an inventor in United States Application No. 09/673,922. Further, it is respectfully requested that the Patent Office accept the newly executed combined declaration and power of attorney executed by the correct inventive entity.

If anyone in the U.S. Patent and Trademark Office wishes to discuss any aspect of this petition, they should call the undersigned attorney at 303-295-8170.

Signed at Denver, Colorado, this 21 day of August 2001.

Respectfully submitted,



Brian Kinnear, Reg. No. 43,717  
Holland & Hart LLP  
555 17<sup>th</sup> Street, Suite 3200  
P.O. Box 8749  
Denver, Colorado 80401-9749  
Telephone: (303) 295-8170  
Facsimile: (303) 295-8261

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of: )  
ALLAIRE et al. ) Examiner:  
Serial No. 09/673,922 ) Art Unit:  
U.S. Filing Date: 20 October 2000 )  
International No. PCT/US/08870 )  
Priority Date 22 April 98 )  
For: HYBRID MAGNETICALLY )  
SUSPENDED AND ROTATED )  
CENTRIFUGAL PUMPING )  
APPARATUS AND METHOD )

PETITION UNDER 37 C.F.R. § 1.47(a) REQUESTING  
WAIVER OF SIGNATURE BY MR. MICHAEL BALOH

Box PCT  
Assistant Commissioner of Patents  
Washington, D.C. 20231

Sir:

Applicants hereby petition the Assistant Commissioner to waive the requirement that Mr. Michael Baloh sign the declarations in this case. As demonstrated by the below facts, Mr. Baloh has already indicated a willingness to signed the required declarations, and the applicants have made a diligent effort to obtain Mr. Baloh's signature.

In accordance with 37 C.F.R. § 1.47(a), a check in the amount of \$130.00 is enclosed as prescribed in 37 C.F.R. § 1.17(i). Please charge Deposit Account No. 08-2623 for any additional fees that may be required for consideration of this petition. One additional copy of this petition, without attachments, is attached.

08/24/2001 MKAYPAGH 00000036 09673922

FACTS IN SUPPORT

01 FC:122

130.00 0P

The below factual account is based on actually knowledge to those facts performed by the agent and information and belief to those performed by others.

1. On May 2, 1997, United States Patent Application No. 08/850,598, now

U.S. Patent No. 6,074,180, was filed on behalf of Pratap S. Khanwilkar, Paul E. Allarie, Gill Brent Bearnson, Don B. Olsen, Eric H. Maslen, and James W. Long.

2. On February 20, 1998, a declaration by the above inventors was filed in response to a Notice to file Missing Parts for United States Patent Application No. 08/850,598, a copy of which is attached to this petition as Exhibit A.

3. On April 22, 1998, a Continuation-in-Part United States Patent Application No. 09/064,352, now abandoned, was filed on behalf of the same inventive entity, which is Pratap S. Khanwilkar, Paul E. Allarie, Gill Brent Bearnson, Don B. Olsen, Eric H. Maslen, and James W. Long. The Continuation-in-Part correctly claimed priority to Parent United States Patent Application No. 08/850,598

4. On September 30, 1998, a declaration by the above inventors was filed in response to a Notice to File Missing Parts for United States Patent Application No. 09/064,352, a copy of which is attached to this petition as Exhibit B.

5. On April 22, 1999, a copy of United States Patent Application No. 09/064,352 was filed as an International Application under the Patent Cooperation Treaty. This PCT Application was designated as International Application No. PCT/US99/08870.

6. Mr. Michael Baloh was listed as an inventor of the PCT Application PCT/US99/08870. Also, Mr. Baloh signed as an inventor, see Exhibit C.

7. On filing of the National Stage Application, which is U.S. Patent Application Serial No. 09/673,922, the correct inventive entity was listed based on the PCT/US99/08870 application; however, through error made under conditions of time urgency and without deceptive intent, the declaration from the abandoned U.S. Patent Application 09/064,352 was filed. As the Patent Office has pointed out, the declaration from the abandoned case did not match the inventive entity.

8. On February 21, 2001, the Patent Office denied a petition to waive rules regarding the discrepancy and directed the agent for the applicants to further research the inventive entity. In this decision, the Office required a proper declaration, statements and written consent of assignees.

9. At this time, the applicants began researching the proper inventive entity. In particular, the University of Virginia Research Foundation researched whether Mr. Decker and Mr. Baloh were inventors. During substantially the same period of time, MedQuest Products, Inc. researched whether Ms. Sinnott was an inventor.

10. After concluding Mr. Decker and Mr. Baloh were proper inventors of the pending application, Mr. Rober Decker (In-House counsel for the University of Virginia Patent Foundation) alerted the undersigned who began preparing packages for Mr. Decker (an ex-student) and Mr. Baloh (a member of the UVA faculty) to be sent to the following addresses when research on the inventive entity was completed:

Mr. Jeffrey Decker  
6387 Lake Trail Drive  
Westerville, OH 43082

Mr. Michael Baloh  
Faculty -UVA  
P.O. Box 400746  
Mechanical Engineering Building  
Charlottesville, VA 22904

At this time, Mr. Decker and Mr. Baloh concurred that they were properly listed as inventors of the claimed subject matter, and they indicated a willingness to sign a declaration stating as much. Because a final determination of whether Ms. Sinnott was/was not an inventor was not resolved, a package was not yet sent to Mr. Decker and Mr. Baloh.

11. After concluding Ms. Sinnott was not a proper inventor of the pending application, in May of 2001, Ms. Michele Richards, who was previously with MedQuest Products, Inc., prepared a package, including a new declaration as well as the application, and sent the package to Ms. Sinnott's last known address in order to obtain Ms. Sinnott's concurrence that she was not an inventor. Ms. Sinnott's known address at this time was:

Ms. M. Mary Sinnott  
4192 Sunrise Dr.  
Park City, UT 84098

In this package, MedQuest Products, Inc. requested Ms. Sinnott to review the filed application and execute the declaration acknowledging that she was **not** an inventor of the present application. At this time, MedQuest Products, Inc. learned that Ms. Sinnott was in the process of moving.

12. During May and into June of 2001, MedQuest Products, Inc. attempted to contact Ms. Sinnott by telephone. During the first attempt MedQuest Products, Inc.

discovered that Ms. Sinnott's telephone number, which was (435) 658-1013, had been changed because Ms. Sinnott had moved to (435) 752-4321. Calls placed to the (435) 752-4321 were eventually returned on July 27, 2001. In the telephonic conference, Ms. Sinnott indicated that she was in fact **not** an inventor of the claimed subject matter.

13. Having concluded the research of the proper inventive entity, I, Brian Kinnear, prepared packages that were sent on July 27, 2001, to obtain a properly executed Declaration by the correct inventive entity, to receive declarations from Mr. Decker and Mr. Baloh that they were inventors and any errors were made without deceptive intent on their part, to receive a declaration from Ms. Sinnott that she was not an inventor and any errors were made without deceptive intent on her part, and assent from the co-assignees to correct the inventive entity.

14. On or about August 8, 2001, having not received a return package from Mr. Baloh, I contacted Mr. Robert Decker at the University of Virginia Patent Foundation to inquire whether Mr. Baloh was still a member of the Faculty at the University of Virginia. During this inquiry, Mr. Decker learned that Mr. Baloh was traveling in Paris, France. However, a mailing address for Mr. Baloh was not obtainable until approximately August 16, 2001, because of various vacations schedules of Mr. Baloh's contacts. On August 16, 2001, an express mail package was sent to Mr. Baloh, which according to UPS tracking information, Mr. Baloh received in France on the Morning of August 20, 2001. While it was requested that Mr. Baloh send a facsimile signature, we have not yet received one. Moreover, we expect Mr. Baloh has signed the necessary paperwork and sent the paperwork in a return overnight envelope that was enclosed, but do to realities of mail delivery (an the apparent unavailability of a facsimile machine), we have not yet received Mr. Baloh's signature. The documents on which Mr. Baloh's signature is expected are attached as Exhibit D.

15. Because the deadline to file a response expires today, August 21, 2001, it is respectfully submitted that Mr. Baloh's signatures will not be received on time.

Therefore, it is respectfully requested that this petition be granted and Mr. Baloh be added as an inventor in United States Application No. 09/673922, and this petition be granted waiving the requirement that Mr. Baloh sign the declarations (both the declaration required by 1.497 and the declaration stating the error occurred without deceptive intent)

because Mr. Baloh's signature is not receivable in time. Mr. Baloh's signature will be submitted when received. If anyone in the U.S. Patent and Trademark Office wishes to discuss any aspect of this petition, they should call the undersigned attorney at 303-295-8170.

Signed at Denver, Colorado, this 21<sup>th</sup> day of August 2001.

Respectfully submitted,



---

Brian Kinnear, Reg. No. 43,717  
Holland & Hart LLP  
555 17<sup>th</sup> Street, Suite 3200  
P.O. Box 8749  
Denver, Colorado 80401-9749  
Telephone: (303) 295-8170  
Facsimile: (303) 295-8261

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Gill Brent Bearnson, Don B. Olsen, Paul  
E. Allaire, Pratap S. Khanwilkar, Eric  
H. Maslen, and James W. Long

Serial No.: 08/850,598

Filed: May 2, 1997

For: HYBRID MAGNETICALLY SUSPENDED AND  
ROTATED CENTRIFUGAL PUMPING APPARATUS  
AND METHOD

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RESPONSE TO NOTICE TO FILE MISSING  
PARTS OF APPLICATION

Assistant Commissioner for Patents  
Box Missing Parts  
Washington, D.C. 20281

Attention: Manager, Application Branch

Sir:

In response to the Notice to File Missing Parts of Application mailed September 24, 1997, please find enclosed herewith the following items for filing in the United States Patent and Trademark Office in connection with the above-identified patent application:

- (1) Declaration and Power of Attorney executed by the inventors Gill Brent Bearnson, Don B. Olsen, Paul E. Allaire, Pratap S. Khanwilkar, Eric H. Maslen, and James W. Long;
- (2) an Assignment from the inventors Gill Brent Bearnson, and Don B. Olsen to the University of Utah;
- (3) an Assignment from the University of Utah to the University of Utah Research Foundation;

- (4) an Assignment from the inventors Paul Allaire, and Eric Maslen to the University of Virginia;
- (5) an Assignment from the University of Virginia to the University of Virginia Patent Foundation;
- (6) an Assignment from the inventors Pratap Khanwilkar, and James W. Long, Jr. to MedQuest Products, Inc.;
- (7) a Verified Statement Claiming Small Entity Status for A Nonprofit Organization (The University of Utah), signed by the Director of the Technology Transfer Office, Chris Jansen;
- (8) a Verified Statement Claiming Small Entity Status for A Nonprofit Organization (The University of Virginia), signed by the Vice Provost of Research, Gene Block;
- (9) a Verified Statement Claiming Small Entity Status for a Small Business Concern (MedQuest Products, Inc.), signed by the President, Pratap Khanwilkar;
- (10) a copy of the Notice to File Missing Parts of Application - Filing Date Granted;
- (11) Check in the amount of \$1,223.00 to cover the filing fee for the above-identified application, the recordation fees for the five (5) enclosed patent assignments, the surcharge fee pursuant to 37 C.F.R. § 1.16(e), and an extension for response within third month. These fees have been calculated as follows:

Basic filing fee for a Small Entity	=	\$395.00
One Extra Claim	=	\$ 88.00
Assignment recordation fees (Five Assignments)	=	\$200.00
Surcharge fee for a Small Entity	=	\$ 65.00

Assistant Commissioner for Patents  
Page 3

Extension for Response within third month	=	<u>\$475.00</u>
<b>TOTAL</b>	=	<b>\$1,223.00</b>

Please debit any additional fees, or credit any overpayment,  
to Deposit Account No. 20-0100.

The Commissioner is hereby authorized to charge payment of the  
following fees associated with this communication or to credit any  
overpayment to Deposit Account No. 20-0100.

- X   Any additional filing fees required under 37 C.F.R.  
\$ 1.16.
- X   Any patent application processing fees under 37  
C.F.R. \$ 1.17.


The Commissioner is hereby authorized to charge payment of the  
following fees during the pendency of this application or credit  
any overpayment to Deposit Account No. 20-0100.

- X   Any patent application processing fees under 37  
C.F.R. \$ 1.17.
- The issue fee set in 37 C.F.R. \$ 1.18 at or before  
mailing of the Notice of Allowance, pursuant to 37  
C.F.R. 1.311(b).
- X   Any filing fees under 37 C.F.R. \$ 1.16 for  
presentation of extra claims.

Please address all future correspondence in connection with  
this case to the attention of the undersigned.

DATED this 20<sup>th</sup> day of February, 1998.

Respectfully submitted,



Vaughn W. North  
Attorney for Applicant  
Registration No. 27,930

THORPE, NORTH & WESTERN, L.L.P.  
9035 South 700 East, Suite 200  
Sandy, Utah 84070  
Telephone: (801) 566-6633

Enclosures  
Docket No.: T4585

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CERTIFICATE OF DEPOSIT UNDER 37 C.F.R. § 1.8

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, postage prepaid, in an envelope addressed to: Assistant Commissioner for Patents, Box Missing Parts, Washington, D.C. 20231, on 2/20/98.



Amy Mecham, Secretary to  
Vaughn W. North  
Attorney for Applicant  
Registration No. 27,930

Transmitted: Declaration and Power of Attorney; Five (5) Assignments, Three (3) Verified Statement and a Check in the amount of \$1,223.00.

**DECLARATION, POWER OF ATTORNEY AND PETITION**

We, Pratap S. Khanwilkar, Paul E. Allaire, Gill Brent Bearnson, Don B. Olsen, Eric H. Maslen, and James W. Long, declare: that we are a citizens of the United States of America except Mr. Khanwilkar who is a citizen of the Republic of India; that our post office addresses are 1651 East Shadow Cove, Salt Lake City, Utah 84121; 805 Emerson Drive, Charlottesville, Virginia 22901; 982 East Jasper Circle, Salt Lake City, Utah 84106; 8832 Blue Jay Lane, Salt Lake City, Utah 84121; 748 Reas Ford Road, Earlysville, Virginia 22903; and 4461 South Parkview Drive, Salt Lake City, Utah 84124, respectively; that we verily believe we are the original, first, and joint inventors of the subject matter of the invention or discovery entitled **HYBRID MAGNETICALLY SUSPENDED AND ROTATED CENTRIFUGAL PUMPING APPARATUS AND METHOD**, for which a patent is sought and which is described and claimed in the specification attached hereto; that we have reviewed and understand the contents of the above-identified specification, including the claims; and that we acknowledge the duty to disclose information which is material to the examination of this application in accordance with § 1.56(a) of Title 37 of the Code of Federal Regulations.

We declare further that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful, false statements and the like so made are punishable by fine or imprisonment, or both, under

§ 1001 of Title 18 of the United States Code, and that such willful, false statements may jeopardize the validity of the application or any patent issuing thereon.

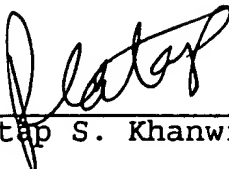
We hereby appoint as our attorneys and/or patent agents, CALVIN E. THORPE, Registration No. 24,928, VAUGHN W. NORTH, Registration No. 27,930, M. WAYNE WESTERN, Registration No. 22,788, GRANT R. CLAYTON, Registration No. 32,462, ALAN J. HOWARTH, Registration No. 36,553, KARL R. CANNON, Registration No. 36,468, RANDALL B. BATEMAN, Registration No. 37,774, DAVID W. O'BRYANT, Registration No. 39,793, and FRANK W. COMPAGNI, Registration No. 40,567, all with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith.

All correspondence and telephonic communications should be directed to:

Vaughn W. North  
THORPE, NORTH & WESTERN  
9035 South 700 East, Suite 200  
Sandy, Utah 84070  
Telephone: (801) 566-6633  
Facsimile: (801) 566-0750

Wherefore, we pray that Letters Patent be granted to us for the invention or discovery described and claimed in the foregoing specification and claims, declaration, power of attorney, and this petition.

Signed at Salt Lake City UTAH, this 12<sup>th</sup> day of FEBRUARY, 1998.

Inventor:   
Pratap S. Khanwilkar

---

Signed at Charlottesville VA, this 3 day of February, 1998.

Inventor:   
Paul E. Allaire

---

Signed at Salt Lake City, UT, this 12 day of Feb., 1998.

Inventor:   
Gill Brent Bearnson

---

Signed at Salt Lake City Utah, this 17 day of February, 1998.

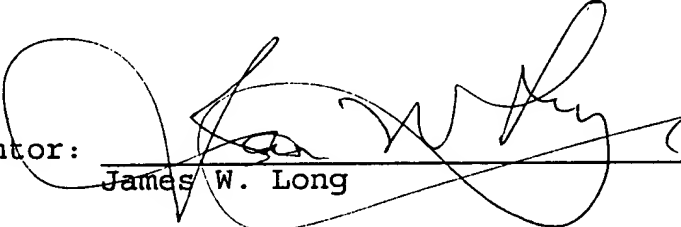
Inventor:   
Don B. Olsen

Signed at Charlottesville, VA, this 5<sup>th</sup> day of  
February, 1998.

Inventor:   
Eric H. Maslen

---

Signed at SALT LAKE CITY UTAH, this 13<sup>th</sup> day of  
FEBRUARY, 1998.

Inventor:   
James W. Long



RECORDATION FORM COVER SHEET  
PATENTS ONLY

U.S. DEPARTMENT OF COMMERCE

(Rev. 1-93)

Patent and Trademark Office

OMB No. 0651-0011 (exp. 4/94)

Tab settings 000

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

## 1. Name of conveying party(ies):

Gill B. Bearnson and Don B. Olsen

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

## 3. Nature of conveyance:

☒ Assignment☐ Merger☐ Security Agreement☐ Change of Name☐ Other \_\_\_\_\_

Execution Date: February 22, 1998

## 2. Name and address of receiving party(ies)

Name: University of Utah

Internal Address: \_\_\_\_\_

Street Address: 421 Wakara Way, Suite 170

City: Salt Lake City State: Utah ZIP: 84108

Additional Name(s) & address(es) attached? ☐ Yes ☒ No

## 4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: \_\_\_\_\_

A. Patent Application No.(s)

08/850,598

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

## 5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Vaughn W. North

Internal Address: THORPE, NORTH &amp; WESTERN, L.L.P.

Street Address: 9035 South 700 East

Suite 200

City: Sandy State: Utah ZIP: 84070

## 6. Total number of applications and patents involved:

1

7. Total fee (37 CFR 3.41).....\$ 40.00

☒ Enclosed☒ Authorized to be charged to deposit account

## 8. Deposit account number:

20-0100 (Deficiencies only)

(Attach duplicate copy of this page if paying by deposit account)

DO NOT USE THIS SPACE

## 9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.

Vaughn W. North

Name of Person Signing

Signature

Date

Total number of pages including cover sheet, attachments, and document: \_\_\_\_\_

Mail documents to be recorded with required cover sheet information to:  
Commissioner of Patents & Trademarks, Box Assignments

PATENT APPLICATION

Applicant or Patentee: MedQuest Products, Inc.  
Attorney: Vaughn W. North  
Docket No.: T4585  
Filed or Issued: May 2, 1997  
For: HYBRID MAGNETICALLY SUSPENDED AND ROTATED CENTRIFUGAL  
PUMPING APPARATUS AND METHOD

**VERIFIED STATEMENT (DECLARATION) CLAIMING SMALL ENTITY  
STATUS (37 CFR 1.9 (f) and 1.27 (c))  
SMALL BUSINESS CONCERN**

I hereby declare that I am

- ☐ the owner of the small business concern identified below:
- ☒ an official of the small business concern empowered to act on behalf of the concern identified below:

NAME OF CONCERN: MedQuest Products, Inc.  
ADDRESS OF CONCERN: 825 North 300 West, Salt Lake City, Utah  
84103-1414

I hereby declare that the above identified small business concern qualifies as a small business concern as defined in 13 CFR 121.3-18, and reproduced in 37 CFR 1.9(d), for purposes of paying reduced fees under section 41(a) and (b) of Title 35, United States Code, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.

I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention, entitled @ by inventor @ described in

- ☐ the specification filed herewith
- ☒ application filed May 2, 1997. Under Serial No. 08/850,598
- ☐ patent no. \_\_\_\_\_, issued \_\_\_\_\_.

If the rights held by the above identified small business concern are not exclusive, each individual, concern or organization having rights to the invention is listed below\* and no rights to the invention are held by any person, other than the inventor, who could not qualify as a small business concern under 37 CFR 1.9(d) or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e).

\*NOTE: Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 CFR 1.27)

FULL NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_  
( ) Individual ( ) Small Business Concern ( ) Nonprofit Organization

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

NAME OF PERSON SIGNING:

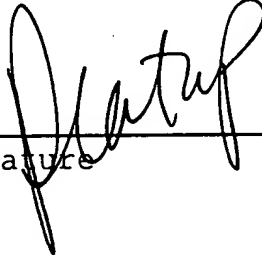
Pratap Khanwilkar

TITLE OF PERSON OTHER THAN OWNER:

MedQuest Products, Inc.

ADDRESS OF PERSON SIGNING:

825 North 300 West, Salt Lake City, Utah  
84103-1414

  
\_\_\_\_\_  
Signature

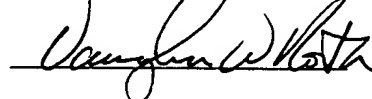
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\_\_\_\_\_  
Date

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: Allaire et al.  
SERIAL NO.: 09/064,352  
FILED: April 22, 1998  
FOR: IMPLANTABLE  
CENTRIFUGAL BLOOD PUMP  
WITH HYBRID MAGNETIC  
BEARINGS  
ART UNIT: 3738  
EXAMINER:  
DOCKET NO.: T4585.CIP

CERTIFICATE OF DEPOSIT  
UNDER 37 C.F.R. § 1.8

I hereby certify that this  
correspondence is being deposited  
with the United States Postal  
Service as First Class Mail, postage  
prepaid, under 37 C.F.R. § 1.8 on  
the date indicated below and is  
addressed to Assistant  
Commissioner for Patents, Box  
Missing Parts, Washington, D.C.  
20231.



Sep 30 1998  
Date of Deposit

RESPONSE TO NOTICE TO FILE MISSING PARTS OF  
PATENT APPLICATION Filing Date Granted

Assistant Commissioner for Patents  
Box Missing Parts  
Washington, D.C. 20231

Sir:

In response to the Notice to File Missing Parts of Application mailed May 30, 1998, please  
find enclosed herewith the following items for filing in the United States Patent and Trademark  
Office in connection with the above-identified patent application:

- ☒ An Assignment from the inventors Paul Allaire and Ron Flack to the University  
of Virginia;
- ☒ An Assignment from the inventors Gill B. Bearnson and Don B. Olsen to the  
University of Utah;

- ☒ An Assignment from the inventors M. Mary Sinnott, B. Ajit Kumar, Pratap S. Khanwilkar and James W. Long, Jr., to Medquest Products, Inc.;
- ☒ An Assignment from the University of Virginia to the University of Virginia Patent Foundation;
- ☒ An Assignment from the University of Utah to the University of Utah Research Foundation;
- ☒ A Verified Statement Claiming Small Entity Status signed by an officer of the University of Virginia Patent Foundation;
- ☒ A Verified Statement Claiming Small Entity Status signed by an officer of the University of Utah Research Foundation;
- ☒ A Verified Statement Claiming Small Entity Status signed by an officer of Medquest Products, Inc.;
- ☒ A copy of the Notice to File Missing Parts of Application Filing Date Granted;
- ☒ Combined inventor Declaration, Power of Attorney, and Petition;
- ☐ Prior Art Statement, Form PTO-1449, and copies of cited prior art;
- ☐ Petition for two month extention; and

X Check No. 4772 in the amount of \$ 860 to cover the filing fee for the above-identified application, the recordation fee for the enclosed 5 patent assignments, the surcharge fee pursuant to 37 C.F.R. § 1.16(e), and the fee for the extension of time to respond to the Notice of Missing Parts. These fees have been calculated as follows:

			SMALL ENTITY		OTHER THAN A SMALL ENTITY	
FOR	NO. FILED	NO. EXTRA	RATE	FEE	RATE	FEE
BASIC FEE				\$395		\$790
TOT. CLAIMS	1-20 =	0	x 11 =	\$0	x 22 =	\$
IND. CLAIMS	1-03 =	0	x 41 =	\$0	x 82 =	\$
MULTIPLE DEPENDENT CLAIMS PRESENTED						
ASSIGNMENT FILING FEE		5 * \$40		\$200	\$160	
SURCHARGE FEE				\$65		
EXTENSION OF TIME TO RESPOND FEE				\$ 200		
			TOTAL	\$860.00	TOTAL	

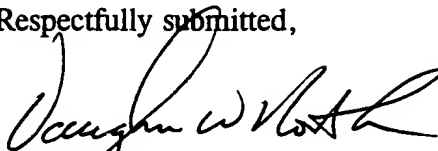
The Commissioner is hereby authorized to charge any additional fees associated with this communication or to credit any overpayment to Deposit Account No. 20-0100.

Assistant Commissioner for Patents  
Page 4

Please address all future correspondence in connection with this case to the attention of the undersigned.

DATED this 30 day of Sep, 1998.

Respectfully submitted,



Vaughn W. North  
Customer No. 20444  
Attorney for Applicant  
Registration No. 27,930

THORPE, NORTH & WESTERN, L.L.P.  
P.O. Box 1219  
Sandy, Utah 84091-1219  
Telephone (801) 566-6633

VWN/jmw

**DECLARATION, POWER OF ATTORNEY AND PETITION**

We, **PAUL E. ALLAIRE, GILL B. BEARNSON, RON FLACK, DON B. OLSEN, and JAMES W. LONG, Jr.**, declare that they are citizens of the United States of America, **B. AJIT KUMAR** and **PRATAP S. KHANWILKAR**, declare that they are citizens of the Republic of India, and **M. MARY SINNOTT** declares that she is a citizen of Canada; that their residence and post office addresses are **805 Emerson Drive, Charlottesville, Virginia 22901; 982 East Jasper Circle, Salt Lake City, Utah 84106; 4265 Viewmont Road, Earlysville, Virginia 22936; 8832 Blue Jay Lane, Salt Lake City, Utah 84121; 4461 South Parkview Drive, Salt Lake City, Utah 84124; 825 North 300 West, Suite NE107, Salt Lake City, Utah 84103; 1651 East Shadow Cove, Salt Lake City, Utah 84121 and 4192 Sunrise Drive, Park City, Utah 84098;** respectively; that they verily believe they are the original, first, and joint inventors of the subject matter of the invention or discovery entitled **Implantable Centrifugal Blood Pump with Hybrid Magnetic Bearings**, for which a patent is sought and which is described and claimed in the specification filed **April 22, 1998** under **Serial No. 09/064,352**; that they have reviewed and understand the contents of the above-identified specification, including the claims; and that they acknowledge the duty to disclose information which is material to the examination of this application in accordance with Section 1.56(a) of Title 37 of the Code of Federal Regulations.

They declare further that all statements made herein of their own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful, false statements and the like so made are punishable by



fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful, false statements may jeopardize the validity of the application or any patent issuing thereon.

We hereby appoint as our attorneys and/or patent agents, CALVIN E. THORPE, Registration No. 24,928, VAUGHN W. NORTH, Registration No. 27,930, M. WAYNE WESTERN, Registration No. 22,788, GRANT R. CLAYTON, Registration No. 32,462, ALAN J. HOWARTH, Registration No. 36,553, KARL R. CANNON, Registration No. 36,468, RANDALL B. BATEMAN, Registration No. DAVID W. O'BRYANT, Registration No. 39,793, FRANK W. COMPAGNI, Registration No. 40,567, GARRON M. HOBSON, Registration No. 41,073, and KENNETH H. TARBET, Registration No. P43,181, all with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith. All correspondence and telephonic communications should be directed to:

VAUGHN W. NORTH  
THORPE, NORTH & WESTERN, LLP  
P.O. Box 1219  
Sandy, Utah 84091-1219  
Telephone: (801)566-6633  
Facsimile: (801)566-0750

Wherefore, We pray that Letters Patent be granted to us for the invention or discovery described and claimed in the foregoing specification and claims, declaration, power of attorney, and this petition.

Signed at Charlottesville, VA, this 29 day of July, 1998.

Inventor: Paul E. Allaire  
PAUL E. ALLAIRE


Signed at Salt Lake City, Utah, this 21 day of July, 1998.

Inventor:   
GILL B. BEARNSON

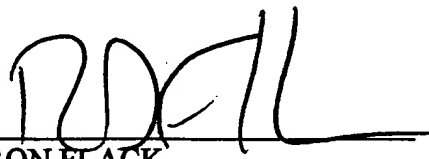
Signed at Salt Lake City, Utah, this 22 day of July, 1998.

Inventor:   
M. MARY SINNOTT

Signed at Salt Lake City, Utah, this 21 day of July, 1998.

Inventor:   
B. AJIT KUMAR

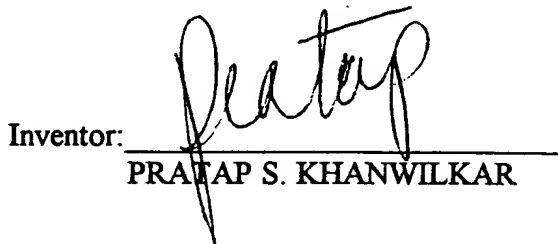
Signed at Charlottesville, VA, this 29 day of July, 1998.

Inventor:   
RON FLACK

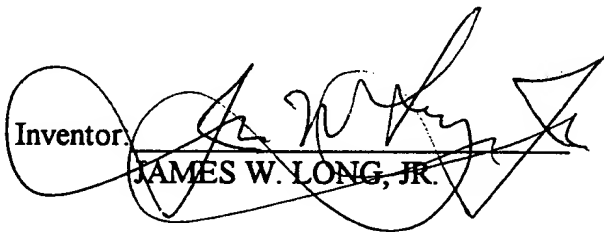
Signed at Salt Lake City, Utah, this 22 day of July, 1998.

Inventor:   
DON B. OLSEN

Signed at Salt Lake City, Utah, this 21 day of July, 1998.

Inventor:   
PRATAP S. KHANWILKAR

Signed at Salt Lake City, Utah, this 21 day of July, 1998.

Inventor:   
JAMES W. LONG, JR.

**DECLARATION CLAIMING SMALL ENTITY STATUS**  
**FOR A SMALL BUSINESS CONCERN**

I, Pratap S. Khanwilkar, hereby declare: that I am President of MEDQUEST PRODUCTS, INC., a corporation of the State of UTAH, having a principal place of business at 825 North 300 West, Suite NE107, Salt Lake City, Utah 84103-1414, I am empowered to act on behalf of MEDQUEST PRODUCTS, INC., and that MEDQUEST PRODUCTS, INC. qualifies as a small business concern as defined in 13 C.F.R. § 121.3-18 and 37 C.F.R. § 1.9(d), for purposes of paying reduced fees to the Patent and Trademark Office under Section 41(a) and (b) of Title 35, United States Code, in that the number of employees of MEDQUEST PRODUCTS, INC., including those of its affiliates, does not exceed 500 persons. I understand that, for purposes of this declaration, (1) the number of employees is the average over the previous fiscal year of the number of persons employed on a full-time, part-time, or temporary basis during each of the pay periods of the fiscal year, and that (2) two business concerns are considered to be affiliates of each other when one business concern either directly or indirectly controls or has the power to control the other, or when a third party or parties control or have the power to control both business concerns.

I further declare that all rights, title, and interest relating to the invention entitled **IMPLANTABLE CENTRIFUGAL BLOOD PUMP WITH HYBRID MAGNETIC BEARINGS**, invented by Paul E. Allaire, Gill B. Bearnson, M. Mary Sinnott, B. Ajit Kumar, Ron Flack, Don B.

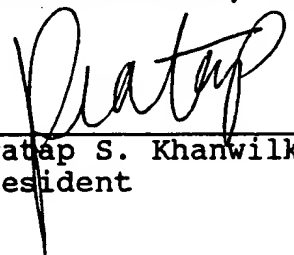
Olsen, Pratap S. Khanwilkar and James W. Long, Jr., as described in the patent application filed April 22, 1998, Serial No. 09/064,352, have been conveyed to and currently remain with MEDQUEST PRODUCTS, INC.

I acknowledge the duty to file, in the above-mentioned application or any patent issued in respect thereof, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of (1) the issue fee or (2) any maintenance fee due after the date on which status as a small entity is no longer appropriate. I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful, false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful, false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this declaration is directed.

DATED this 21 day of July, 1998.

MEDQUEST PRODUCTS, INC.

By:

  
Pratap S. Khanwilkar  
President

PATENT APPLICATION

Applicant or Patentee: Paul E. Allaire, Gill B. Bearnson,  
M. Mary Sinnott, B. Ajit Kumar, Ron Flack,  
Don B. Olsen, Pratap S. Khanwilkar  
and James W. Long, Jr.

Serial No.: 09/064,352

Filed: April 22, 1998

Title: Implantable Centrifugal Blood Pump  
With Hybrid Magnetic Bearings

Attorney: Vaughn W. North

Docket No.: T4585 CIP

**VERIFIED STATEMENT (DECLARATION)  
CLAIMING SMALL ENTITY**

**STATUS (37 CFR 1.9 (f) and 1.27 (d))  
NONPROFIT ORGANIZATION**

I hereby declare that I am an official empowered to act on behalf of the nonprofit organization identified below:

NAME OF ORGANIZATION: UNIVERSITY OF UTAH RESEARCH FOUNDATION

ADDRESS OF ORGANIZATION: 421 Wakara Way, Suite 170  
Salt Lake City, Utah 84108

TYPE OF ORGANIZATION:

( X ) University or other institution of higher education  
( ) Tax exempt under Internal Revenue Service Code (26 USC 501(a)  
and 501(c) (3))  
( ) Nonprofit scientific or educational under statute of state of  
The United States of America  
(Name of state \_\_\_\_\_)  
(Citation of statute \_\_\_\_\_)

I hereby declare that the nonprofit organization identified above qualifies as a nonprofit organization as defined in 37 CFR 1.9(e) for purposes of paying reduced fees under section 41(a) and (b) of Title 35, United States Code with regard to the invention entitled **IMPLANTABLE CENTRIFUGAL BLOOD PUMP WITH HYBRID MAGNETIC BEARINGS** by inventors Paul E. Allaire, Gill B. Bearnson, M. Mary Sinnott, B. Ajit Kumar, Ron Flack, Don B. Olsen, Pratap S. Khanwilkar and James W. Long, Jr., described in

( ) the specification filed herewith.  
( X ) application serial no. 09/064/352, filed April 22, 1998.  
( ) patent no. \_\_\_\_\_, issued \_\_\_\_\_.

I hereby declare that rights under contract or law have been conveyed to and remain with the nonprofit organization with regard to the above identified invention.

If the rights held by the nonprofit organization are not exclusive, each individual, concern or organization having rights to the invention is listed below\* and no rights to the invention are held by any person, other than the inventor, who could not qualify as a small business concern under 37 CFR 1.9(d) or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e).

\*NOTE: Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 CFR 1.27)

FULL NAME \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
( ) Individual ( ) Small Business Concern ( ) Nonprofit Organization

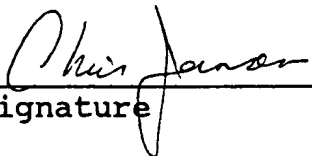
FULL NAME \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
( ) Individual ( ) Small Business Concern ( ) Nonprofit Organization

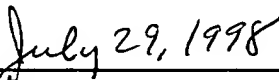
I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

NAME OF PERSON SIGNING: Chris Jansen  
TITLE IN ORGANIZATION: VP. for Research

ADDRESS OF PERSON SIGNING: 421 Wakara Way, Suite 170  
Salt Lake City, Utah 84108

  
\_\_\_\_\_  
Signature

  
\_\_\_\_\_  
Date

PATENT APPLICATION

Applicant or Patentee: Paul E. Allaire, Gill B. Bearnson,  
M. Mary Sinnott, B. Ajit Kumar, Ron Flack,  
Don B. Olsen, Pratap S. Khanwilkar  
and James W. Long, Jr.

Serial No.: 09/064,352

Filed: April 22, 1998

Title: Implantable Centrifugal Blood Pump  
With Hybrid Magnetic Bearings

Attorney: Vaughn W. North

Docket No.: T4585 CIP

**VERIFIED STATEMENT (DECLARATION)  
CLAIMING SMALL ENTITY**

**STATUS (37 CFR 1.9 (f) and 1.27 (d))  
NONPROFIT ORGANIZATION**

I hereby declare that I am an official empowered to act on behalf of the nonprofit organization identified below:

NAME OF ORGANIZATION: UNIVERSITY OF VIRGINIA PATENT FOUNDATION

ADDRESS OF ORGANIZATION: 1224 W. Main Street, Suite 1-110  
Charlottesville, Virginia 22903

TYPE OF ORGANIZATION:

- ( X ) University or other institution of higher education  
( ) Tax exempt under Internal Revenue Service Code (26 USC 501(a) and 501(c) (3))  
( ) Nonprofit scientific or educational under statute of state of The United States of America  
(Name of state \_\_\_\_\_)  
(Citation of statute \_\_\_\_\_)

I hereby declare that the nonprofit organization identified above qualifies as a nonprofit organization as defined in 37 CFR 1.9(e) for purposes of paying reduced fees under section 41(a) and (b) of Title 35, United States Code with regard to the invention entitled **IMPLANTABLE CENTRIFUGAL BLOOD PUMP WITH HYBRID MAGNETIC BEARING** by inventors Pratap S. Khanwilkar, Paul Allaire, Gill Brent Bearnson, Don B. Olsen, James W. Long, Ron Flack, B. Ajit Kumar and M. Mary Sinnott, described in

- ( ) the specification filed herewith.  
( X ) application serial no. 09/064/352, filed April 22, 1998.  
( ) patent no. \_\_\_\_\_, issued \_\_\_\_\_.

I hereby declare that rights under contract or law have been conveyed to and remain with the nonprofit organization with regard to the above identified invention.

If the rights held by the nonprofit organization are not exclusive, each individual, concern or organization having rights to the invention is listed below\* and no rights to the invention are held by any person, other than the inventor, who could not qualify as a small business concern under 37 CFR 1.9(d) or by any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e).



\*NOTE: Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 CFR 1.27)

FULL NAME \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
( ) Individual ( ) Small Business Concern ( ) Nonprofit Organization

FULL NAME \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
( ) Individual ( ) Small Business Concern ( ) Nonprofit Organization

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

NAME OF PERSON SIGNING: **Gene Block**  
TITLE IN ORGANIZATION: **Vice Provost of Research**

ADDRESS OF PERSON SIGNING: **Washington Hall**  
**P.O. Box 9025**  
**Charlottesville, Virginia 22906**

Gene Block  
Signature

7/27/98  
Date

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

## 1. Name of conveying party(ies):

**M. Mary Sinnott, B. Ajit Kumar,  
Pratap S. Khanwilkar and James W. Long, Jr.**Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

## 2. Name and address of receiving party(ies)

Name: Medquest Products, Inc.

Internal Address: \_\_\_\_\_

Street Address: 825 North 300 West, Suite NE107.Salt Lake City, Utah 84103Additional Name(s) & address(es) attached? ☐ Yes ☒ No

## 3. Nature of conveyance:

☒ Assignment☐ Merger☐ Security Agreement☐ Change of Name☐ Other \_\_\_\_\_Execution Date: July 22, 1998

## 4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: \_\_\_\_\_

A. Patent Application No.(s)

09/064,352

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

## 5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Customer No. 20444  
Vaughn W. NorthMailing Address: P.O. Box 1219Sandy, Utah 84091-1219

Street Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ ZIP: \_\_\_\_\_

6. Total number of applications and patents involved: 17. Total fee (37 CFR 3.41).....\$ 40☒ Enclosed☒ Any deficiencies in enclosed fees  
Authorized to be charged to deposit account:

## 8. Deposit account number:

20-0100 (Deficiencies only)

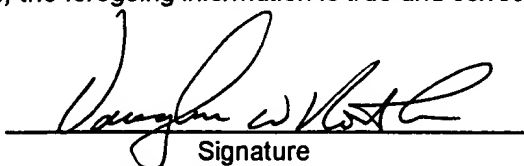
(Attach duplicate copy of this page if paying by deposit account)

DO NOT USE THIS SPACE

## 9. Statement and signature.

*To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.*Vaughn W. North

Name of Person Signing

  
SignatureSep 30, 1998  
DateTotal number of pages including cover sheet, attachments, and document: 4Mail documents to be recorded with required cover sheet information to:  
Commissioner of Patents & Trademarks, Box Assignments

A S S I G N M E N T

WHEREAS, We, M. Mary Sinnott, B. Ajit Kumar, Pratap S. Khanwilkar and James W. Long, Jr., have invented a certain new and useful improvement in an **IMPLANTABLE CENTRIFUGAL BLOOD PUMP WITH HYBRID MAGNETIC BEARINGS**, for which an application for United States Letters Patent was filed on April 22, 1998, and assigned Serial No. 09/064,352; and

WHEREAS, Medquest Products, Inc., a Utah corporation, having a business address of 825 North 300 West, Suite NE107, Salt Lake City, Utah 84103, is desirous of acquiring the entire right, title and interest in the same;

NOW, THEREFORE, in consideration of one dollar (\$1.00), the receipt and sufficiency whereof is hereby acknowledged, and other good and valuable consideration, We, the said M. Mary Sinnott, B. Ajit Kumar, Pratap S. Khanwilkar and James W. Long, Jr., by these presents do sell, assign and transfer unto said MedQuest Products, Inc., the full and exclusive right to the said invention and in and to said application and any and all divisions and continuations, substitutes and reissues of said application and the entire right, title and interest in, to and under any and all Letters Patent of the United States and foreign countries that may issue or be granted on said invention.

The Commissioner of Patents is hereby authorized and requested to issue said Letters Patent to said MedQuest Products, Inc., as the assignee of the entire right, title, and interest in and to the

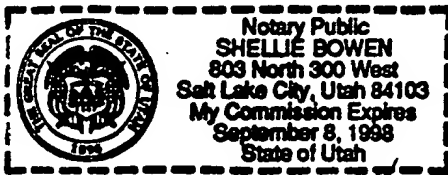
same, for its sole use and behoof; and for the use and behoof of its legal representatives, to the full end of the term for which said Letters Patent may be granted, as fully and entirely as the same would have been held by me had this assignment and sale not been made.

Executed this 22<sup>nd</sup> day of July, 1998, at Salt Lake City, Utah.

M. Mary Sinnott  
M. Mary Sinnott

STATE OF UTAH                    )  
                                          : ss  
County of Salt Lake )

Before me personally appeared said M. Mary Sinnott and acknowledged the foregoing instrument to be her free act and deed this 22<sup>nd</sup> day of July, 1998.



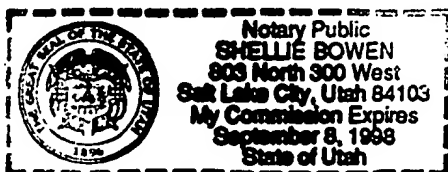
Shellie Bowen  
Notary Public

Executed this 22<sup>nd</sup> day of July, 1998, at Salt Lake City, Utah.

B. Ajit Kumar  
B. Ajit Kumar

STATE OF UTAH                    )  
                                          : ss  
County of Salt Lake )

Before me personally appeared said B. Ajit Kumar and acknowledged the foregoing instrument to be his free act and deed this 22<sup>nd</sup> day of July, 1998.



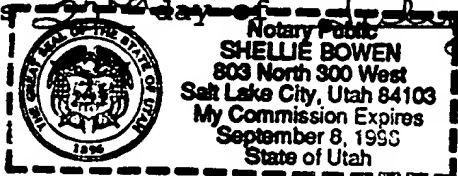
Shellie Bowen  
Notary Public

Executed this 22<sup>nd</sup> day of July, 1998, at  
Salt Lake City, Utah

Pratap S. Khanwilkar  
Pratap S. Khanwilkar

STATE OF Utah )  
: ss  
County of Salt Lake

Before me personally appeared said Pratap S. Khanwilkar and acknowledged the foregoing instrument to be his free act and deed this 22<sup>nd</sup> day of July, 1998.



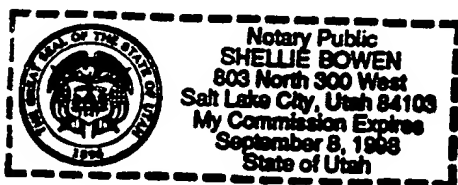
Shellie Bowen  
Notary Public

Executed this 21 day of July, 1998, at  
Salt Lake City, Utah

James W. Long, Jr.  
James W. Long, Jr.

STATE OF Utah )  
: ss  
County of Salt Lake

Before me personally appeared said James W. Long, Jr. and acknowledged the foregoing instrument to be his free act and deed this 21<sup>st</sup> day of July, 1998.



Shellie Bowen  
Notary Public

RECORDATION FORM COVER SHEET  
PATENTS ONLY

U.S. DEPARTMENT OF COMMERCE

Patent and Trademark Office

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

## 1. Name of conveying party(ies):

**Gill B. Bearnson and Don B. Olsen**Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

## 3. Nature of conveyance:

☒ Assignment☐ Merger☐ Security Agreement☐ Change of Name☐ Other \_\_\_\_\_Execution Date: July 22, 1998

## 2. Name and address of receiving party(ies)

Name: University of Utah

Internal Address: \_\_\_\_\_

Street Address: 421 Wakara Way,Salt Lake City, Utah 84121Additional Name(s) & address(es) attached? ☐ Yes ☒ No

## 4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: \_\_\_\_\_

A. Patent Application No.(s)

**09/064,352**

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

## 5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Customer No. 20444

Vaughn W. North

Mailing Address: P.O. Box 1219Sandy, Utah 84091-1219

Street Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ ZIP: \_\_\_\_\_

6. Total number of applications and patents involved: **1**7. Total fee (37 CFR 3.41).....\$ 40☒ Enclosed☒ Any deficiencies in enclosed fees  
☒ Authorized to be charged to deposit account:

## 8. Deposit account number:

20-0100 (Deficiencies only)

(Attach duplicate copy of this page if paying by deposit account)

DO NOT USE THIS SPACE

## 9. Statement and signature.

*To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.*Vaughn W. North

Name of Person Signing

  
SignatureSept 30 1998  
DateTotal number of pages including cover sheet, attachments, and document: **3**Mail documents to be recorded with required cover sheet information to:  
Commissioner of Patents & Trademarks, Box Assignments

**A S S I G N M E N T**

WHEREAS, we, **GILL B. BEARNSON** and **DON B. OLSEN**, have invented a certain new and useful improvement in an **IMPLANTABLE CENTRIFUGAL BLOOD PUMP WITH HYBRID MAGNETIC BEARINGS**, for which an application for United States Letters Patent was filed April 22, 1998, assigned Serial Number 09/064,352; and

WHEREAS, the **UNIVERSITY OF UTAH**, a university of higher education, and a nonprofit corporation, organized and existing under the laws of the State of Utah, located at 421 Wakara Way, Suite 170, Salt Lake City, Utah, 84108, is desirous of acquiring the entire right, title and interest in the same.

NOW, THEREFORE, in consideration of one dollar (\$1.00), the receipt and sufficiency whereof is hereby acknowledged, and other good and valuable consideration, we, the said **GILL B. BEARNSON** and **DON B. OLSEN**, by these presents do sell, assign and transfer unto the **UNIVERSITY OF UTAH**, the full and exclusive right to the said invention and in and to said application and any and all divisions and continuations, substitutes and reissues of said application and the entire right, title and interest in, to and under any and all Letters Patent of the United States and foreign countries that may issue or be granted on said invention.

The Commissioner of Patents is hereby authorized and requested to issue said Letters Patent to the **UNIVERSITY OF UTAH**, as the assignee of the entire right, title, and interest in and to the same, for its sole use and behoof; and for the use and behoof of its legal representatives, to the full end of the term for which said Letters Patent may be granted, as fully and entirely as the same would

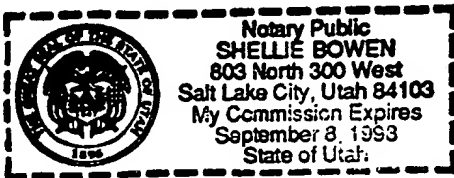
have been held by us had this Assignment and sale not been made.

Executed this 2<sup>nd</sup> day of July, 1998, at Salt Lake City, Utah

Gill B. Bearnson  
GILL B. BEARNSON

STATE OF UTAH     )  
                              : ss  
County of Salt Lake    )

Before me personally appeared said **GILL B. BEARNSON** and acknowledged the foregoing instrument to be his free act and deed this 2<sup>nd</sup> day of July, 1998.



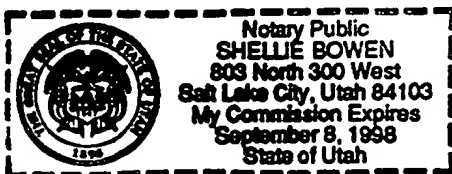
Shellie Bowen  
NOTARY PUBLIC

Executed this 2<sup>nd</sup> day of July, 1998, at Salt Lake City, Utah

Don B. Olsen  
DON B. OLSEN

STATE OF UTAH     )  
                              : ss  
County of Salt Lake    )

Before me personally appeared said **DON B. OLSEN** and acknowledged the foregoing instrument to be his free act and deed this 2<sup>nd</sup> day of July, 1998.



Shellie Bowen  
NOTARY PUBLIC



REGISTRATION FORM COVER SHEET  
PATENTS ONLYU.S. DEPARTMENT OF COMMERCE  
Patent and Trademark Office

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

## 1. Name of conveying party(ies):

**University of Utah**Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

## 3. Nature of conveyance:

☒ Assignment☐ Merger☐ Security Agreement☐ Change of Name☐ Other \_\_\_\_\_Execution Date: July 29, 1998

## 2. Name and address of receiving party(ies)

Name: University of Utah Research Foundation

Internal Address: \_\_\_\_\_

Street Address: 421 Wakara Way.Salt Lake City, Utah, 84108Additional Name(s) & address(es) attached? ☐ Yes ☒ No

## 4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: \_\_\_\_\_

A. Patent Application No.(s)

**09/064,352**

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

## 5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Customer No. 20444Vaughn W. NorthMailing Address: P.O. Box 1219Sandy, Utah 84091-1219

Street Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ ZIP: \_\_\_\_\_

6. Total number of applications and patents involved: **1**7. Total fee (37 CFR 3.41).....\$ 40☒ Enclosed☒ Any deficiencies in enclosed fees  
Authorized to be charged to deposit account:

## 8. Deposit account number:

20-0100 (Deficiencies only)

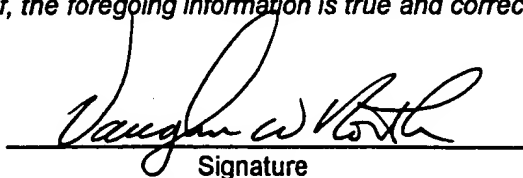
(Attach duplicate copy of this page if paying by deposit account)

DO NOT USE THIS SPACE

## 9. Statement and signature.

*To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.*Vaughn W. North

Name of Person Signing

  
SignatureSep 30, 1998  
DateTotal number of pages including cover sheet, attachments, and document: 3Mail documents to be recorded with required cover sheet information to:  
Commissioner of Patents & Trademarks, Box Assignments

**ASSIGNMENT**

WHEREAS, Gill B. Bearnson and Don B. Olsen, executed an Assignment on July 22, 1998, to the **UNIVERSITY OF UTAH** for an improvement in an **IMPLANTABLE CENTRIFUGAL BLOOD PUMP WITH HYBRID MAGNETIC BEARINGS**, bearing University of Utah designation U2376, for which an application for United States Letters Patent was filed on April 22, 1998 and assigned Serial No. 09/064,352; and

WHEREAS, the **UNIVERSITY OF UTAH RESEARCH FOUNDATION**, a nonprofit corporation, organized and existing under the laws of the State of Utah, located at 421 Wakara Way, Suite 170, Salt Lake City, Utah 84108, is desirous of acquiring the entire right, title and interest in the same;

NOW, THEREFORE, in consideration of one dollar (\$1.00), the receipt and sufficiency whereof is hereby acknowledged, and other good and valuable consideration, the **UNIVERSITY OF UTAH**, by these presents do sell, assign and transfer unto said **UNIVERSITY OF UTAH RESEARCH FOUNDATION**, the full and exclusive right to the said invention and in and to said application and any and all divisions and continuations, substitutes and reissues of said application and the entire right, title and interest in, to and under any and all Letters Patent of the United States and foreign countries that may issue or be granted on said invention.

The Commissioner of Patents is hereby authorized and requested to issue said Letters Patent to the **UNIVERSITY OF UTAH RESEARCH FOUNDATION**, as the assignee of the entire right, title, and interest in and to the same, for its sole use and behoof; and for the use and behoof of its legal representatives, to the full end of the term for which said Letters Patent may be granted, as fully

and entirely as the same would have been held by the UNIVERSITY OF UTAH had this Assignment and sale not been made.

Executed this 29 day of July, 1998, at Salt Lake City, UT.

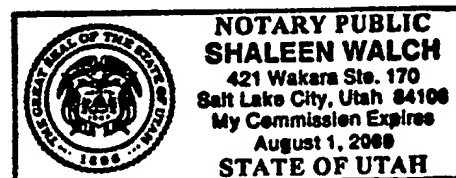
UNIVERSITY OF UTAH

By: Chris Jansen  
Chris Jansen

STATE OF UTAH    )  
                              : ss  
County of Salt Lake )

Before me personally appeared said Chris Jansen and acknowledged the foregoing instrument to be his/her free act and deed this 29<sup>th</sup> day of July, 1998.

Shaleen Walch  
NOTARY PUBLIC



(Rev. 6-93)  
OMB No. 0651-0011 (exp. 4/94)

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

## 1. Name of conveying party(ies):

**Paul Allaire and Ron Flack**Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

## 3. Nature of conveyance:

☒ Assignment☐ Merger☐ Security Agreement☐ Change of Name☐ Other \_\_\_\_\_Execution Date: July 29, 1998

## 2. Name and address of receiving party(ies)

Name: University of Virginia

Internal Address: \_\_\_\_\_

Street Address: Washington HallP.O. Box 9025, Charlottesville, Va., 22906Additional Name(s) & address(es) attached? ☐ Yes ☒ No

## 4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: \_\_\_\_\_

A. Patent Application No.(s)

**09/064,352**

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

## 5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Customer No. 20444

Vaughn W. North

Mailing Address: P.O. Box 1219Sandy, Utah 84091-1219

Street Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ ZIP: \_\_\_\_\_

6. Total number of applications and patents involved: 17. Total fee (37 CFR 3.41).....\$ 40☒ Enclosed☒ Any deficiencies in enclosed fees  
Authorized to be charged to deposit account:

## 8. Deposit account number:

20-0100 (Deficiencies only)

(Attach duplicate copy of this page if paying by deposit account)

DO NOT USE THIS SPACE

## 9. Statement and signature.

*To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.*Vaughn W. North

Name of Person Signing

  
SignatureSep 30, 1998  
DateTotal number of pages including cover sheet, attachments, and document: 3Mail documents to be recorded with required cover sheet information to:  
Commissioner of Patents & Trademarks, Box Assignments

**A S S I G N M E N T**

WHEREAS, we, **PAUL E. ALLAIRE and RON FLACK**, have invented a certain new and useful improvement in an **IMPLANTABLE CENTRIFUGAL BLOOD PUMP WITH HYBRID MAGNETIC BEARINGS**, for which an application for United States Letters Patent was filed April 22, 1998, assigned Serial Number 09/064,352; and

WHEREAS, the **UNIVERSITY OF VIRGINIA**, a university of higher education, and a nonprofit corporation, organized and existing under the laws of the State of Virginia, located at Washington Hall, P.O. Box 9025, Charlottesville, Virginia 22906, is desirous of acquiring the entire right, title and interest in the same.

NOW, THEREFORE, in consideration of one dollar (\$1.00), the receipt and sufficiency whereof is hereby acknowledged, and other good and valuable consideration, we, the said **PAUL E. ALLAIRE and RON FLACK**, by these presents do sell, assign and transfer unto the **UNIVERSITY OF VIRGINIA**, the full and exclusive right to the said invention and in and to said application and any and all divisions and continuations, substitutes and reissues of said application and the entire right, title and interest in, to and under any and all Letters Patent of the United States and foreign countries that may issue or be granted on said invention.

The Commissioner of Patents is hereby authorized and requested to issue said Letters Patent to the **UNIVERSITY OF VIRGINIA**, as the assignee of the entire right, title, and interest in and to the same, for its sole use and behoof, and for the use and behoof of its legal representatives, to the full end of the term for which said Letters Patent may be granted, as fully and entirely as the same

Executed this 29 day of July, 1998, at Charlottesville VA

Paul E. Allaire  
PAUL E. ALLAIRE

Before me personally appeared said **PAUL E. ALLAIRE** and acknowledged the foregoing instrument to be his free act and deed this 29<sup>th</sup> day of July, 1998.

Rita F. Kostoff  
NOTARY PUBLIC

My Comm. Exps. 11/30/98

Executed this 29 day of July, 1998, at Charlotteville, VA

RON FLACK

Before me personally appeared said **RON FLACK** and acknowledged the foregoing instrument to be his free act and deed this \_\_\_\_\_ day of \_\_\_\_\_, 1998.

**NOTARY PUBLIC**

REGISTRATION FORM COVER SHEET  
PATENTS ONLYU.S. DEPARTMENT OF COMMERCE  
Patent and Trademark Office

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

## 1. Name of conveying party(ies):

**The University of Virginia**Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

## 2. Name and address of receiving party(ies)

**Name: University of Virginia Patent  
Foundation**

Internal Address: \_\_\_\_\_

Street Address: **1224 Main Street, Ste 1-110****Charlottesville, VA 22903**Additional Name(s) & address(es) attached? ☐ Yes ☒ No

## 3. Nature of conveyance:

- ☒ Assignment ☐ Merger  
☐ Security Agreement ☐ Change of Name  
☐ Other \_\_\_\_\_

Execution Date: **July 29, 1998**

## 4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: \_\_\_\_\_

A. Patent Application No.(s)

**09/064,352**

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No

## 5. Name and address of party to whom correspondence concerning document should be mailed:

Name: **Customer No. 20444**Mailing Address: **Vaughn W. North****Thorpe, North & Western, L.L.P.****P.O. Box 1219, Sandy, Utah 84091-1219**

Street Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ ZIP: \_\_\_\_\_

6. Total number of applications and patents involved: **1**7. Total fee (37 CFR 3.41).....\$ **40**☒ Enclosed☒ Any deficiencies are authorized to be charged to  
deposit account:

## 8. Deposit account number:

**20-0100 (Deficiencies only)**

(Attach duplicate copy of this page if paying by deposit account)

DO NOT USE THIS SPACE

## 9. Statement and signature.

*To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.***Vaughn W. North**

Name of Person Signing

  
Signature**Sep 30, 1998**  
DateTotal number of pages including cover sheet, attachments, and document: **3**Mail documents to be recorded with required cover sheet information to:  
Commissioner of Patents & Trademarks, Box Assignments

**A S S I G N M E N T**

WHEREAS, **Paul E. Allaire and Ron Flack**, executed an Assignment on July,  
29, 1998, to the **UNIVERSITY OF VIRGINIA** for an improvement in an **IMPLANTABLE CENTRIFUGAL BLOOD PUMP WITH HYBRID MAGNETIC BEARINGS**, for which an application for United States Letters Patent was filed on **April 22, 1998** and assigned Serial No. **09/064,352**; and

WHEREAS, the **UNIVERSITY OF VIRGINIA PATENT FOUNDATION**, a nonprofit corporation, organized and existing under the laws of the State of **VIRGINIA**, located at 1224 W. Main Street, Suite 1-110, Charlottesville, Virginia 22903, is desirous of acquiring the entire right, title and interest in the same;

NOW, THEREFORE, in consideration of one dollar (\$1.00), the receipt and sufficiency whereof is hereby acknowledged, and other good and valuable consideration, the **UNIVERSITY OF VIRGINIA**, by these presents do sell, assign and transfer unto said **UNIVERSITY OF VIRGINIA PATENT FOUNDATION**, the full and exclusive right to the said invention and in and to said application and any and all divisions and continuations, substitutes and reissues of said application and the entire right, title and interest in, to and under any and all Letters Patent of the United States and foreign countries that may issue or be granted on said invention.

The Commissioner of Patents is hereby authorized and requested to issue said Letters Patent to the **UNIVERSITY OF VIRGINIA PATENT FOUNDATION**, as the assignee of the entire right, title, and interest in and to the same, for its sole use and behoof; and for the use and behoof of its legal representatives, to the full end of the term for which said Letters Patent may be granted, as



fully and entirely as the same would have been held by the UNIVERSITY OF VIRGINIA had this Assignment and sale not been made.

Executed this 29th day of July, 1998, at Charlottesville, Va.

UNIVERSITY OF VIRGINIA

By: Gene Block  
Gene Block  
Vice Provost of Research

STATE OF VIRGINIA ) at large  
                                  : ss  
County of Albemarle

Before me personally appeared said **Gene Block** and acknowledged the foregoing instrument to be his free act and deed this 29th day of July, 1998.

Paul M. Perkins  
NOTARY PUBLIC

**My Commission Expires  
November 30, 2000**

## Supplemental Box

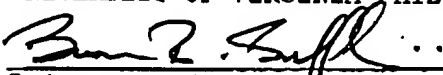
If the Supplemental Box is not used, this sheet should not be included in the request.

1. If, in any of the Boxes, the space is insufficient to furnish all the information: in such case, write "Continuation of Box No. ..." [indicate the number of the Box] and furnish the information in the same manner as required according to the captions of the Box in which the space was insufficient, in particular:
  - (i) if more than two persons are involved as applicants and/or inventors and no "continuation sheet" is available: in such case, write "Continuation of Box No. III" and indicate for each additional person the same type of information as required in Box No. III. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below;
  - (ii) if, in Box No. II or in any of the sub-boxes of Box No. III, the indication "the States indicated in the Supplemental Box" is checked: in such case, write "Continuation of Box No. II" or "Continuation of Box No. III" or "Continuation of Boxes No. II and No. III" (as the case may be), indicate the name of the applicant(s) involved and, next to (each) such name, the State(s) (and/or, where applicable, ARIPO, Eurasian, European or OAPI patent) for the purposes of which the named person is applicant;
  - (iii) if, in Box No. II or in any of the sub-boxes of Box No. III, the inventor or the inventor/applicant is not inventor for the purposes of all designated States or for the purposes of the United States of America: in such case, write "Continuation of Box No. II" or "Continuation of Box No. III" or "Continuation of Boxes No. II and No. III" (as the case may be), indicate the name of the inventor(s) and, next to (each) such name, the State(s) (and/or, where applicable, ARIPO, Eurasian, European or OAPI patent) for the purposes of which the named person is inventor;
  - (iv) if, in addition to the agent(s) indicated in Box No. IV, there are further agents: in such case, write "Continuation of Box No. IV" and indicate for each further agent the same type of information as required in Box No. IV;
  - (v) if, in Box No. V, the name of any State (or OAPI) is accompanied by the indication "patent of addition," or "certificate of addition," or if, in Box No. V, the name of the United States of America is accompanied by an indication "continuation" or "continuation-in-part": in such case, write "Continuation of Box No. V" and the name of each State involved (or OAPI), and after the name of each such State (or OAPI), the number of the parent title or parent application and the date of grant of the parent title or filing of the parent application;
  - (vi) if, in Box No. VI, there are more than three earlier applications whose priority is claimed: in such case, write "Continuation of Box No. VI" and indicate for each additional earlier application the same type of information as required in Box No. VI;
  - (vii) if, in Box No. VI, the earlier application is an ARIPO application: in such case, write "Continuation of Box No. VI", specify the number of the item corresponding to that earlier application and indicate at least one country party to the Paris Convention for the Protection of Industrial Property for which that earlier application was filed.
2. If, with regard to the precautionary designation statement contained in Box No. V, the applicant wishes to exclude any State(s) from the scope of that statement: in such case, write "Designation(s) excluded from precautionary designation statement" and indicate the name or two-letter code of each State so excluded.
3. If the applicant claims, in respect of any designated Office, the benefits of provisions of the national law concerning non-prejudicial disclosures or exceptions to lack of novelty: in such case, write "Statement concerning non-prejudicial disclosures or exceptions to lack of novelty" and furnish that statement below.

## CONTINUATION OF BOX IX:

UNIVERSITY OF VIRGINIA PATENT FOUNDATION

ALLAIRE, Paul E.

  
 Brian R. Suffredini, Patent Counsel

Inventor

BEARNSON, Gill B.

Flack, Ron

  
 Inventor

Inventor

OLSEN, Don B.

LONG, James W.

  
 Inventor

Inventor

KUMAR, B. Ajit

KHANWILKAR, Pratap

  
 Inventor

Inventor

DECKER, Jeffrey

BALOH, Michael

Inventor

Inventor

**Supplemental Box** | If the Supplemental Box is not used, this sheet should not be included in the request.

1. If, in any of the Boxes, the space is insufficient to furnish all the information: in such case, write "Continuation of Box No. ..." [Indicate the number of the Box] and furnish the information in the same manner as required according to the captions of the Box in which the space was insufficient, in particular:

- (i) If more than two persons are involved as applicants and/or inventors and no "continuation sheet" is available: in such case, write "Continuation of Box No. III" and indicate for each additional person the same type of information as required in Box No. III. The country of the address indicated in this Box is the applicant's State (that is, country) of residence if no State of residence is indicated below;
- (ii) If, in Box No. II or in any of the sub-boxes of Box No. III, the indication "the States indicated in the Supplemental Box" is checked: in such case, write "Continuation of Box No. II" or "Continuation of Box No. III" or "Continuation of Boxes No. II and No. III" (as the case may be), indicate the name of the applicant(s) involved and, next to (each) such name, the State(s) (and/or, where applicable, ARIPO, Eurasian, European or OAPI patent) for the purposes of which the named person is applicant;
- (iii) If, in Box No. II or in any of the sub-boxes of Box No. III, the inventor or the inventor/applicant is not inventor for the purposes of all designated States or for the purposes of the United States of America: in such case, write "Continuation of Box No. II" or "Continuation of Box No. III" or "Continuation of Boxes No. II and No. III" (as the case may be), indicate the name of the inventor(s) and, next to (each) such name, the State(s) (and/or, where applicable, ARIPO, Eurasian, European or OAPI patent) for the purposes of which the named person is inventor;
- (iv) If, in addition to the agent(s) indicated in Box No. IV, there are further agents: in such case, write "Continuation of Box No. IV" and indicate for each further agent the same type of information as required in Box No. IV;
- (v) If, in Box No. V, the name of any State (or OAPI) is accompanied by the indication "patent of addition," or "certificate of addition," or if, in Box No. V, the name of the United States of America is accompanied by an indication "continuation" or "continuation-in-part": in such case, write "Continuation of Box No. V" and the name of each State involved (or OAPI), and after the name of each such State (or OAPI), the number of the parent title or parent application and the date of grant of the parent title or filing of the parent application;
- (vi) If, in Box No. VI, there are more than three earlier applications whose priority is claimed: in such case, write "Continuation of Box No. VI" and indicate for each additional earlier application the same type of information as required in Box No. VI;
- (vii) If, in Box No. VI, the earlier application is an ARIPO application: in such case, write "Continuation of Box No. VI", specify the number of the item corresponding to that earlier application and indicate at least one country party to the Paris Convention for the Protection of Industrial Property for which that earlier application was filed.

2. If, with regard to the precautionary designation statement contained in Box No. V, the applicant wishes to exclude any State(s) from the scope of that statement: in such case, write "Designation(s) excluded from precautionary designation statement" and indicate the name or two-letter code of each State so excluded.

3. If the applicant claims, in respect of any designated Office, the benefits of provisions of the national law concerning non-prejudicial disclosures or exceptions to lack of novelty: in such case, write "Statement concerning non-prejudicial disclosures or exceptions to lack of novelty" and furnish that statement below.

#### CONTINUATION OF BOX IX:

University of Virginia Patent Foundation

Brian R. Suffredini

Brian R. Suffredini, Patent Counsel

BEARNSON, Gill B.

Inventor

OLSEN, Don B.

Inventor

KUMAR, B. Ajit

Inventor

DECKER, Jeffery

Jeffery Decker  
Inventor

ALLAIRE, Paul E.

Paul Allaire  
Inventor

FLACK, Ron

R. Flack  
Inventor

LONG, James W.

Inventor

KHANWILAKR, Pratap

Inventor

BALOH, Michael

Michael Baloh  
Inventor

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

ALLAIRE et al.

U.S. Serial No. 09/673,922

U.S. filing date: 20 October 2000

(A National filing from PCT/US99/08870

Int. filing date: 22 April 1999

Priority date: 22 April 1998

WO 99/53974

Int. Publication date 28 October 1999)

For: HYBRID MAGNETICALLY  
SUSPENDED AND ROTATED  
CENTRIFUGAL PUMPING  
APPARATUS AND METHOD

LETTER TRANSMITTING RESPONSE TO PETITION DENIAL

Sir:

This is in response to (1) the NOTIFICATION OF MISSING REQUIREMENTS UNDER 35 U.S.C. 371 IN THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) mailed on 08 November 2000, and (2) the DECISION ON REQUEST dated 21 February 2001. The period for which to respond to the petition extends until 21 August 2001 by virtue of a petition for a four month extension of time and fee filed herewith.

Enclosed herewith is a 37 CFR 1.136 petition for a four-month extension of time, including payment of the fee set in 37 CFR 1.17(a). Thus this response is timely filed.

Notice is taken of the fact that the present application contains a total of 30 claims and a total of 5 independent claims, rather than a total of 28 claims and a total of

4 independent claims as is stated in Form PTO-1390 filed with this application. In accordance with instructions contained on that form, deposit account 08-2623 should have been charged an appropriate additional fee.

The BACKGROUND statement contained in the above-noted DECISION ON REQUEST, acknowledges that the Notification of Missing Parts and Notification of a Defective Declaration mailed on 8 November by the DO/EO/US indicated that the declaration filed in the above-identified United States patent application on 20 October 2000 was defective in that:

- (1) The names and signatures of Jeffery Decker and Michael Baloh were missing from the declaration, and
- (2) The declaration was executed by M. Mary Sinnott who was not named in the PCT/US99/08870 international application.

The CONCLUSIONS statement contained in the above-noted DECISION ON REQUEST requires:

- (1) A proper declaration in compliance with 37 CFR 1.497 (a) and (b) executed by all named inventors;
- (2) Statements from those inventors being added or deleted as an inventor that the error in inventorship occurred without any deceptive intention on his or her part; and
- (3) A written consent of the assignees in compliance with 37 CFR 3.73(b).

Investigation has shown that the correct inventorship of above-identified United States patent application filed on 20 October 2000 comprises the following nine co-inventors:

Paul Allaire, Gill Bearnson, Ron Flack, Don B. Olsen, James W. Long, B. Ajit Kumar, Pratap S. Khanwilker, Jeffery Decker and Michael Baloh.

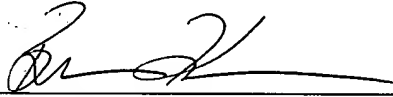
Enclosed herewith is:

- (1) A declaration in compliance with 37 CFR 1.497 (a) and (b) executed by all joint-inventors of the subject matter claimed in above-identified application USSN 09/673,992, with the exception of Mr. Michael Baloh;
- (2) A Petition under 37 CFR 1.183 for requesting a wavier of the rules-requirement that Mr. Michael Baloh declare that his omission as a co-inventor of above-identified application USSN 09/673,992 occurred through error and without deceptive intent and requesting a wavier of the rule-requirement that the above declaration (item 1) be signed by Mr. Michael Baloh;
- (3) A statement by the undersigned attorney of record stating that after diligent effort to locate the various inventors (and non-inventors), the consent of all the inventors to the proper inventive entity was obtained. However, as explained further in the attached petition and declaration, due to time delays in coordinating the information and tracking down all of the inventors, Mr. Baloh's signature was not obtainable in time to file a timely response to the present action. Mr. Baloh's signature will be submitted on receipt, however.
- (4) A petition under 37 CFR 1.183 requesting that the Assistant Commissioner correct the inventorship named in the above-identified USSN 09/673,992 by adding Jeffery Decker and Michael Baloh and removing M. Mary Sinnott as co-inventors; and

(5) The written consents of the assignees of this application in compliance with  
37 CFR 3.73(b).

Signed at Denver, Colorado, this 21 day of August 2001.

Respectfully submitted,



---

Brian Kinnear, Reg. No. 43,717  
Holland & Hart LLP  
555 17<sup>th</sup> Street, Suite 3200  
P.O. Box 8749  
Denver, Colorado 80401-9749  
Telephone: (303) 295-8170  
Facsimile: (303) 295-8261

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

ALLAIRE et al.

Examiner:

U.S. Serial No. 09/673,922

U.S. filing date: 20 October 2000

Art Unit:

(A National filing from PCT/US99/08870

Int. filing date : 22 April 1999

Priority date: 22 April 1998

WO 99/53974

Int. Publication date 28 October 1999)

For: HYBRID MAGNETICALLY  
SUSPENDED AND ROTATED  
CENTRIFUGAL PUMPING  
APPARATUS AND METHOD

CONSENT OF ASSIGNEE MEDQUEST PRODUCTS, INC.  
TO CORRECT INVENTIONSHIP

Box PCT  
Assistant Commissioner of Patents  
Washington, D.C. 20231

Sir:

I, Gill B. Bearnson, acting on behalf of, and authorized to sign for, MedQuest Products, Inc., believe that MedQuest Products, Inc. along with co-assigneess University of Utah Research Foundation and University of Virginia Patent Foundation, own a right, title, and interest in the above-identified U.S. application 09/673,922, because of agreements between MedQuest and certain of the inventors and by assignments of a prior U. S. patent application 09/064,352 that is the U.S. priority-application for the above-identified application PCT/US99/08870, which assignments include assignments of all corresponding foreign, domestic and continuation applications.

Assignments of U.S. priority-application 09/064,352 are recorded with the United States Patent & Trademark Office at the following locations:



An assignment by certain inventors to MedQuest Products, Inc. at Reel 9495 and Frame 0318.

An assignment by certain inventors to the University of Utah at Reel 9494 and Frame 0618, followed by an assignment by the University of Utah to the University of Utah Research Foundation at Reel 9495 and Frame 0956.

An assignment by certain inventors to the University of Virginia at Reel 9495 and Frame 0951, followed by an assignment by the University of Virginia to the University of Virginia Patent Foundation at Reel 9495 and Frame 0280.

Upon information and belief, I, Gill B. Bearnson, acting on behalf of, and authorized to sign for, MedQuest Products, Inc., believe that Paul E. Allaire, Gill B. Bearnson, Ron Flack, Don B. Olsen, James W. Long, Jr., B. Abit Kumar, Pratap S. Khanwilker, Jeffrey Decker, and Michael Baloh co-inventors of the subject matter claimed in U.S. application 09/673,922. Further, based on the declaration of M. Mary Sinnott, I believe that M. Mary Sinnott was added as a co-inventor through error made without deceptive intent.

MedQuest Products, Inc. hereby consents to have the inventorship of U.S. application 09/673,922 corrected by adding Jeffrey Decker and Michael Baloh as inventors and removing M. Mary Sinnott as an inventor.

Dated: 7/30/01

Respectfully submitted,



Gill B. Bearnson  
Senior Project Manager  
MedQuest Products, Inc.

PATENT  
Attorney Docket No. 39573.830003.004  
Express Mail No. EL379006323US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of:

ALLAIRE et al.

Examiner:

U.S. Serial No. 09/673922

Art Unit:

U.S. filing date: 20 October 2000

(A national filing from PCT/US/08870

Int. filing date: 22 April 1999

Priority date: 22 April 1998

WO 99/53974

Int. Publication date 28 October 1999)

For: HYBRID MAGNETICALLY  
SUSPENDED AND ROTATED  
CENTRIFUGAL PUMPING  
APPARATUS AND METHOD

CONSENT OF ASSIGNEE THE UNIVERSITY OF VIRGINIA PATENT FOUNDATION  
TO CORRECT INVENTORSHIP

Box PCT  
Assistant Commissioner of Patents  
Washington, D.C. 20231

Sir:

I, Robert Decker, Esq., acting on behalf of, and authorized to sign for, the University of Virginia Patent Foundation, believe the University of Virginia Patent Foundation along with co-assigneess MedQuest Products, Inc. and the University of Utah Research Foundation, own a right, title, and interest in the above-identified U. S. application 09/673,922, because of agreements between the University and certain of the inventors and by assignments of a prior U.S. patent application 09/064,352 that is the U. S. priority-application for the above-identified application PCT/US99/08870, which assignments include assignments of all corresponding foreign, domestic and continuation applications.

Assignments of U.S. priority-application 09/064,352 are recorded with the United States Patent & Trademark Office at the following locations:

An assignment by certain inventors to MedQuest Products, Inc. at Reel 9495 and Frame 0318.

An assignment by certain inventors to the University of Utah at Reel 9494 and Frame 0618, followed by an assignment by the University of Utah to the University of Utah Research Foundation at Reel 9495 and Frame 0956.

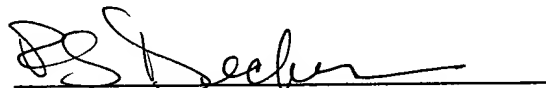
An assignment by certain inventors to the University of Virginia at Reel 9495 and Frame 0951, followed by an assignment by the University of Virginia to the University of Virginia Patent Foundation at Reel 9495 and Frame 0280.

Upon information and belief, I, Robert Decker, acting on behalf of, and authorized to sign for, the University of Virginia Patent Foundation, believe that Paul E. Allaire, Gill B. Beamson, Ron Flack, Don B. Olsen, James W. Long, Jr., B. Abit Kumar, Pratap S. Khanwilker, Jeffrey Decker and Michael Baloh are co-inventors of the subject matter claimed in U.S. Application 09/673,922. Further, based on the declaration of M. Mary Sinnott, I believe that M. Mary Sinnott was added as a co-inventor through error made without deceptive intent.

The University of Virginia Patent Foundation hereby consents to have the inventorship of U.S. application 09/673,922 corrected by adding Jeffrey Decker and Michael Baloh as inventors and removing M. Mary Sinnott as an inventor.

Dated: August 7, 2001

Respectfully submitted,



Robert Decker, Esq.  
In-House Patent Counsel  
University of Virginia Patent Foundation

PATENT  
Attorney Docket No. 39573.830003.004  
Express Mail No.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

ALLAIRE et al.

Examiner:

U. S. Serial No. 09/673922

Art Unit:

U.S. filing date: 20 October 2000

(A national filing from PCT/US/08870

Int. filing date: 22 April 1999

Priority date: 22 April 1998

WO 99/53874

Int. Publication date 28 October 1999)

For: HYBRID MAGNETICALLY  
SUSPENDED AND ROTATED  
CENTRIFUGAL PUMPING  
APPARATUS AND METHOD

CONSENT OF ASSIGNEE THE UNIVERSITY OF UTAH RESEARCH FOUNDATION  
TO CORRECT INVENTORSHIP

Box PCT  
Assistant Commissioner of Patents  
Washington, D.C. 20231

Sir:

I, Brent Brown, Esq., acting on behalf of, and authorized to sign for, the University of Utah Research Foundation, believe the University of Utah Research Foundation along with co-assignees MedQuest Products, Inc. and University of Virginia Patent Foundation, own a right, title, and interest in the above-identified U.S. application 09/673,922, because of agreements between the University and certain of the inventors and by assignments of a prior U.S. application 09/064,352 that is the U.S. priority-application for the above-identified application PCT/US99/08870, which assignments include assignments of all corresponding foreign, domestic and continuation applications.

Assignments of U.S. priority-application 09/064,352 are recorded with the United States Patent & Trademark Office at the following locations:

An assignment by certain inventors to MedQuest Products, Inc. at Reel 9495 and Frame 0318.

An assignment by certain inventors to the University of Utah at Reel 9494 and Frame 0618, followed by an assignment by the University of Utah to the University of Utah Research Foundation at Reel 9495 and Frame 0956.

An assignment by certain inventors to the University of Virginia at Reel 9495 and Frame 0951, followed by an assignment by the University of Virginia to the University of Virginia Patent Foundation at Reel 9495 and Frame 0280.

Upon information and belief, I, Brent Brown, acting on behalf of, and authorized to sign for, the University of Utah Research Foundation, believe that Paul E. Allaire, Gill B. Bearson, Ron Flack, Don B. Olsen, James W. Long, Jr., B. Abit Kumar, Pratap S. Khanwilker, Jeffrey Decker, and Michael Baloh are co-inventors of the subject matter claimed in U.S. application 09/763,922. Further, based on the declaration of M. Mary Sinnott, I believe that M. Mary Sinnott was added as a co-inventor through error made without deceptive intent.

The University of Utah Research Foundation hereby consents to have the inventorship of U. S. application 09/673,922 corrected by adding Jeffrey Decker and Michael Baloh as inventors and removing M. Mary Sinnott as an inventor.

Dated: 8/21/01

Respectfully submitted,



Brent Brown, Esq.  
Technology Manager  
University of Utah Research Foundation

In re U.S. Application of: )  
ALLAIRE et al. )  
U.S. Serial No.: 09/673,992 ) Examiner:  
U.S. filing date: 20 October 2000 )  
(A National filing from PCT/US99/08870 ) Art Unit:  
Int. filing Date: 22 April 1999 )  
Priority data: 09/064,352; 22 April 1998 )  
WO 99/53974 )  
Int. Publication date 28 October 1999) )  
For: HYBRID MAGNETICALLY )  
SUSPENDED AND ROTATED )  
CENTRIFUGAL PUMPING APPARATUS )  
AND METHOD )

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DECLARATION OF MICHAEL BALOH

I, Michael Baloh, declare as follows:

1. Application PCT/US99/08870, which designated the United States, was filed on April 22, 1999.
2. I am designated as an applicant and as an inventor in Application PCT/US99/08870.
3. United States Patent Application 09/673,922 was filed on April 22, 2000 as a national filing out of Application PCT/US99/08870.
4. Through error, which error was made under a condition of time-urgency, and without deceptive intent, I was named as an inventor on United States

Patent Application 09/673,922, but did not submit a corresponding declaration.

5. I have read and I understand United States Patent Application 09/673,922, including the subject matter claimed therein.
6. I am a co-inventor of the subject matter claimed in United States Patent Application 09/673,922.

---

Date

---

Michael Baloh

**COMBINED DECLARATION AND POWER  
OF ATTORNEY FOR PATENT APPLICATION**

**DECLARATION:**

As the below named inventors, we hereby declare that:

Our residences, post office addresses and citizenships are as stated below next to our names.

We believe we are the original, first and joint inventors of the subject matter that is claimed in application PCT/US99/08870 filed April 22, 1999 and entitled IMPLANTABLE CENTRIFUGAL BLOOD PUMP WITH HYBRID MAGNETIC BEARINGS.

We believe we are the original, first and joint inventors of the subject matter that is claimed and for which a United States patent is sought on the invention entitled HYBRID MAGNETICALLY SUSPENDED AND ROTATED CENTRIFUGAL PUMPING APPARATUS AND METHOD, filed in the United States Patent and Trademark Office on October 20, 2000 as Serial No. 09/673,922, which United States Patent application is a national filing out of PCT/US99/08870.

The persons named as the inventors in this United States Patent application are: Paul E. Allarie, Gill B. Bearson, Ron Flack, Pratap S. Khanwilkar, B. Ajit Kumar, James W. Long, Jr., Don B. Olsen, Jeffrey Decker and Michael Balhoh.

We hereby state that we have reviewed and understand the contents of the above-identified United States specification, including the claims, as amended by any amendment referred to above.

We acknowledge the duty to disclose information which is material to the examination of this United States Patent application in accordance with Title 37, Code of Federal Regulations, § 1.56(a), as attached.

We hereby claim foreign priority benefits under Title 35, United States Code, § 119/365 of any foreign application(s) for patent of inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on the basis of which priority is claimed:

- ☒ no such applications have been filed.  
☐ such applications have been filed as follows:

FOREIGN APPLICATION(S), IF ANY, CLAIMING PRIORITY UNDER 35 USC § 119/365			
COUNTRY	APPLICATION NUMBER	DATE OF FILING (day, month, year)	DATE OF ISSUE (day, month, year)
ALL FOREIGN APPLICATION(S), IF ANY, FILED BEFORE THE PRIORITY APPLICATION(S)			
COUNTRY	APPLICATION NUMBER	DATE OF FILING (day, month, year)	DATE OF ISSUE (day, month, year)

We hereby claim the benefit under Title 35, United States Code, § 120/365 of any United States and PCT international application(s) listed below and, insofar as the subject matter of each of the claims of this United States Patent application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, § 112, we acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, § 1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this United States Patent application.



U.S. or PCT APPLICATION NUMBER	DATE OF FILING (day, month, year)	STATUS (patented, pending, abandoned)
60/016,856	May 3, 1996	Abandoned
08/850,598	May 2, 1997	U. S. Patent No. 6,074,180
09/064,352	April 22, 1998	Abandoned
PCT/US/08870	April 22, 1999	Pending

**POWER OF ATTORNEY:**

As named inventors, we hereby appoint the following patent attorneys to prosecute this application and transact all business in the Patent Office connected therewith:

Brian P. Kinnear, Reg. No. 43,717;  
F.A. "Sandy" Sirr, Reg. No. 17,265; and  
Earl C. Hancock, Reg. No. 19,472;

Send all correspondence relating to this matter to:

**Brian P. Kinnear, Esq.**  
HOLLAND & HART LLP  
555 17th Street, Suite 3200  
P.O. Box 8749  
Denver, Colorado 80201-8749

Direct all telephone calls to **Brian P. Kinnear** at (303) 295-8170.

We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Inventor's Full Name:	Paul E. Allarie
Inventor's Signature:	
Date:	
Residence: (City, State and/or Country)	805 Emerson Drive Charlottesville, VA, 22901
Citizenship:	USA
Postal Address:	Same

Inventor's Full Name:	Gill B. Bearnson
Inventor's Signature:	
Date:	
Residence: (City, State and/or Country)	982 East Jasper Circle Salt Lake City, UT, 84106
Citizenship:	USA
Postal Address:	Same

Inventor's Full Name:	Ron Flack
Inventor's Signature:	
Date:	
Residence: (City, State and/or Country)	4265 Viewmont Road Earlsville, VA, 22936
Citizenship:	USA
Postal Address:	Same

Inventor's Full Name:	Pratap S. Khanwilkar
Inventor's Signature:	
Date:	
Residence: (City, State and/or Country)	1651 East Shadow Cove Salt Lake City, UT, 84121
Citizenship:	Republic of India
Postal Address:	Same

Inventor's Full Name:	B. Ajit Kumar
Inventor's Signature:	
Date:	
Residence: (City, State and/or Country)	Suite NE 107 825 North 300 West, Salt Lake City, UT, 84103
Citizenship:	Republic of India
Postal Address:	Same

Inventor's Full Name:	James W. Long Jr.
Inventor's Signature:	
Date:	
Residence: (City, State and/or Country)	4461 South Parkview Drive Salt Lake City, UT, 84124
Citizenship:	USA
Postal Address:	Same

Inventor's Full Name:	Don B. Olsen
Inventor's Signature:	
Date:	
Residence: (City, State and/or Country)	8832 Blue Jay Lane Salt Lake City, UT, 84121
Citizenship:	USA
Postal Address:	Same

Inventor's Full Name:	Jeffrey Decker
Inventor's Signature:	
Date:	
Residence: (City, State and/or Country)	6387 Lake Trail Drive Westerville, OH, 43082
Citizenship:	USA
Postal Address:	Same

Inventor's Full Name:	Michael Baloh
Inventor's Signature:	
Date:	
Residence: (City, State and/or Country)	206 Greentree Park Drive Charlottesville, VA, 22901
Citizenship:	USA
Postal Address:	Same

§ 1.56 duty to disclose information material to patentability.

(a) A patent by its very nature is affected with a public interest. The public interest is best served, and the most effective patent examination occurs when, at the time an application is being examined, the Office is aware of and evaluates the teachings of all information material to patentability. Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section. The duty to disclose information exists with respect to each pending claim until the claim is cancelled or withdrawn from consideration, or the application becomes abandoned. Information material to the patentability of a claim that is cancelled or withdrawn from consideration need not be submitted if the information is not material to the patentability of any claim remaining under consideration in the application. There is no duty to submit information which is not material to the patentability of any existing claim. The duty to disclose all information known to be material to patentability is deemed to be satisfied if all information known to be material to patentability of any claim issued in a patent was cited by the Office or submitted to the Office in the manner prescribed by §§ 1.97(b)-(d) and 1.98. However, no patent will be granted on an application in connection with which fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct. The office encourages applicants to carefully examine:

(1) prior art cited in search reports of a foreign patent office in a counterpart application, and

(2) the closest information over which individuals associated with the filing or prosecution of a patent application believe any pending claim patentably defines, to make sure that any material information contained therein is disclosed to the Office.

(b) Under this section, information is material to patentability when it is not cumulative to information already of record or being made of record in the application, and

(1) It establishes, by itself or in combination with other information, a *prima facie* case of unpatentability of a claim; or

(2) It refutes, or is inconsistent with, a position the applicant takes in:

(i) Opposing an argument of unpatentability relied on by the Office, or

(ii) Asserting an argument of patentability.

A *prima facie* case of unpatentability is established when the information compels a conclusion that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability.

(c) Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:

(1) Each inventor named in the application;

(2) Each attorney or agent who prepares or prosecutes the application; and

(3) Each other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application.

(d) Individuals other than the attorney, agent or inventor may comply with this section by disclosing information to the attorney, agent or inventor.

In re U.S. Application of: )  
)  
ALLAIRE et al. )  
) Examiner:  
U.S. Serial No.: 09/673,992 )  
U.S. filing date: 20 October 2000 )  
) Art Unit:  
(A National filing from )  
PCT/US99/08870 )  
Int. filing Date: 22 April 1999 )  
Priority data: 09/064,352; 22 April )  
1998 )  
WO 99/53974 )  
Int. Publication date 28 October )  
1999)

For: HYBRID MAGNETICALLY  
SUSPENDED AND ROTATED  
CENTRIFUGAL PUMPING  
APPARATUS AND METHOD

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DECLARATION OF MS. M. MARY SINNOTT

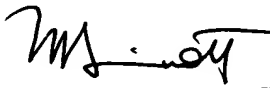
I, Ms. M. Mary Sinnott, declare as follows:

1. United States Patent Application Serial No. 09/064,352 was filed in the United States Patent & Trademark Office on 22 April 1998, and I am named as an inventor on application 09/064,352. I was incorrectly named as an inventor in this application due to a clerical error made without deceptive intent.
2. The 09/064,352 application is the priority document for PCT Application PCT/US99/08870 having an international filing date of 22 April 1999, and I am not named as an inventor on the PCT/US99/08870 application.
3. United States Patent Application Serial No. 09/673,922 having a filing date of 22 October 2000 is a United States National Stage Application filed from the

PCT/US99/08870 application, and I am not named as an inventor on the 09/673,922 application, but a declaration was submitted containing my signature.

4. I have read and I understand the application 09/673,922, including the subject matter claimed therein.
5. I am not a co-inventor of the subject matter claimed in application 09/673,922.
6. Due to errors made at the time of completing the 09/673,922 application, which errors were made under conditions of urgency, and which errors were made without deceptive intent, a declaration including my signature was submitted, but I should not be named as an inventor in this application.

30 July 01  
Date

  
Ms. M. Mary Sinnott

In re U.S. Application of: )  
ALLAIRE et al. )  
U.S. Serial No.: 09/673,992 ) Examiner:  
U.S. filing date: 20 October 2000 )  
(A National filing from PCT/US99/08870 ) Art Unit:  
Int. filing Date: 22 April 1999 )  
Priority data: 09/064,352; 22 April 1998 )  
WO 99/53974 )  
Int. Publication date 28 October 1999) )  
For: HYBRID MAGNETICALLY )  
SUSPENDED AND ROTATED )  
CENTRIFUGAL PUMPING APPARATUS )  
AND METHOD )

---

DECLARATION OF JEFFREY DECKER

I, Jeffrey Decker, declare as follows:

1. Application PCT/US99/08870, which designated the United States, was filed on April 22, 1999.
2. I am designated as an applicant and as an inventor in Application PCT/US99/08870.
3. United States Patent Application 09/673,922 was filed on April 22, 2000 as a national filing out of Application PCT/US99/08870.
4. Through error, which error was made under a condition of time-urgency, and without deceptive intent, I was named as an inventor on United States

Patent Application 09/673,922, but did not submit a corresponding declaration.

5. I have read and I understand United States Patent Application 09/673,922, including the subject matter claimed therein.
6. I am a co-inventor of the subject matter claimed in United States Patent Application 09/673,922.

8/6/01  
Date

Jeffrey A. Decker  
Jeffrey Decker



**COMBINED DECLARATION AND POWER  
OF ATTORNEY FOR PATENT APPLICATION**

**DECLARATION:**

As the below named inventors, we hereby declare that:

Our residences, post office addresses and citizenships are as stated below next to our names.

We believe we are the original, first and joint inventors of the subject matter that is claimed in application PCT/US99/08870 filed April 22, 1999 and entitled IMPLANTABLE CENTRIFUGAL BLOOD PUMP WITH HYBRID MAGNETIC BEARINGS.

We believe we are the original, first and joint inventors of the subject matter that is claimed and for which a United States patent is sought on the invention entitled HYBRID MAGNETICALLY SUSPENDED AND ROTATED CENTRIFUGAL PUMPING APPARATUS AND METHOD, filed in the United States Patent and Trademark Office on October 20, 2000 as Serial No. 09/673,922, which United States Patent application is a national filing out of PCT/US99/08870.

The persons named as the inventors in this United States Patent application are: Paul E. Allarie, Gill B. Bearnson, Ron Flack, Pratap S. Khanwilkar, B. Ajit Kumar, James W. Long, Jr., Don B. Olsen, Jeffrey Decker and Michael Balhoh.

We hereby state that we have reviewed and understand the contents of the above-identified United States specification, including the claims, as amended by any amendment referred to above.

We acknowledge the duty to disclose information which is material to the examination of this United States Patent application in accordance with Title 37, Code of Federal Regulations, § 1.56(a), as attached.

We hereby claim foreign priority benefits under Title 35, United States Code, § 119/365 of any foreign application(s) for patent of inventor's certificate listed below and have also identified below any foreign application for patent or inventor's certificate having a filing date before that of the application on the basis of which priority is claimed:

- ☒ no such applications have been filed.  
☐ such applications have been filed as follows:

FOREIGN APPLICATION(S), IF ANY, CLAIMING PRIORITY UNDER 35 USC § 119/365			
COUNTRY	APPLICATION NUMBER	DATE OF FILING (day, month, year)	DATE OF ISSUE (day, month, year)
ALL FOREIGN APPLICATION(S), IF ANY, FILED BEFORE THE PRIORITY APPLICATION(S)			
COUNTRY	APPLICATION NUMBER	DATE OF FILING (day, month, year)	DATE OF ISSUE (day, month, year)

We hereby claim the benefit under Title 35, United States Code, § 120/365 of any United States and PCT international application(s) listed below and, insofar as the subject matter of each of the claims of this United States Patent application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35, United States Code, § 112, we acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations, § 1.56(a) which occurred between the filing date of the prior application and the national or PCT international filing date of this United States Patent application.

U.S. or PCT APPLICATION NUMBER	DATE OF FILING (day, month, year)	STATUS (patented, pending, abandoned)
60/016,856	May 3, 1996	Abandoned
08/850,598	May 2, 1997	U. S. Patent No. 6,074,180
09/064,352	April 22, 1998	Abandoned
PCT/US/08870	April 22, 1999	Pending

**POWER OF ATTORNEY:**

As named inventors, we hereby appoint the following patent attorneys to prosecute this application and transact all business in the Patent Office connected therewith:

Brian P. Kinnear, Reg. No. 43,717;  
F.A. "Sandy" Sirr, Reg. No. 17,265; and  
Earl C. Hancock, Reg. No. 19,472;

Send all correspondence relating to this matter to:

Brian P. Kinnear, Esq.  
HOLLAND & HART LLP  
555 17th Street, Suite 3200  
P.O. Box 8749  
Denver, Colorado 80201-8749

Direct all telephone calls to **Brian P. Kinnear** at (303) 295-8170.

We hereby declare that all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Inventor's Full Name:	Paul E. Allarie
Inventor's Signature:	<i>Paul E. Allarie</i>
Date:	<i>Aug 18, 2001</i>
Residence: (City, State and/or Country)	805 Emerson Drive Charlottesville, VA, 22901
Citizenship:	USA
Postal Address:	Same

Inventor's Full Name:	Gill B. Bearnson
Inventor's Signature:	
Date:	
Residence: (City, State and/or Country)	982 East Jasper Circle Salt Lake City, UT, 84106
Citizenship:	USA
Postal Address:	Same

Inventor's Full Name:	Ron Flack
Inventor's Signature:	
Date:	
Residence: (City, State and/or Country)	4265 Viewmont Road Earlsville, VA, 22936
Citizenship:	USA
Postal Address:	Same

Inventor's Full Name:	Pratap S. Khanwilkar
Inventor's Signature:	
Date:	
Residence: (City, State and/or Country)	1651 East Shadow Cove Salt Lake City, UT, 84121
Citizenship:	Republic of India
Postal Address:	Same

Inventor's Full Name:	B. Ajit Kumar
Inventor's Signature:	
Date:	
Residence: (City, State and/or Country)	Suite NE 107 825 North 300 West, Salt Lake City, UT, 84103
Citizenship:	Republic of India
Postal Address:	Same

Inventor's Full Name:	James W. Long Jr.
Inventor's Signature:	
Date:	
Residence: (City, State and/or Country)	4461 South Parkview Drive Salt Lake City, UT, 84124
Citizenship:	USA
Postal Address:	Same

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Date:	
Residence: (City, State and/or Country)	8832 Blue Jay Lane Salt Lake City, UT, 84121
Citizenship:	USA
Postal Address:	Same

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Inventor's Signature:	
Date:	
Residence: (City, State and/or Country)	6387 Lake Trail Drive Westerville, OH, 43082
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Inventor's Full Name:	Michael Baloh
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Date:	
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Citizenship:	USA
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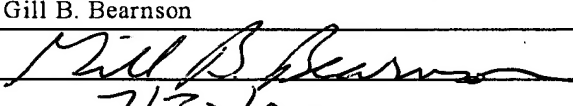
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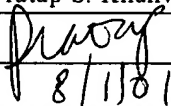
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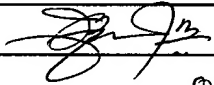
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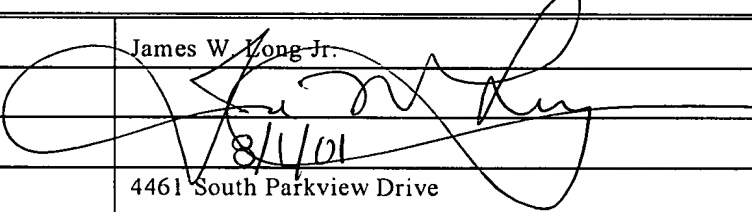
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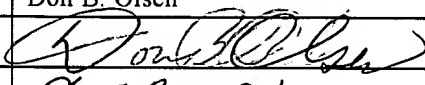
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Inventor's Signature:	
Date:	
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Inventor's Full Name:	Michael Baloh
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§ 1.56 duty to disclose information material to patentability.

(a) A patent by its very nature is affected with a public interest. The public interest is best served, and the most effective patent examination occurs when, at the time an application is being examined, the Office is aware of and evaluates the teachings of all information material to patentability. Each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in this section. The duty to disclose information exists with respect to each pending claim until the claim is cancelled or withdrawn from consideration, or the application becomes abandoned. Information material to the patentability of a claim that is cancelled or withdrawn from consideration need not be submitted if the information is not material to the patentability of any claim remaining under consideration in the application. There is no duty to submit information which is not material to the patentability of any existing claim. The duty to disclose all information known to be material to patentability is deemed to be satisfied if all information known to be material to patentability of any claim issued in a patent was cited by the Office or submitted to the Office in the manner prescribed by §§ 1.97(b)-(d) and 1.98. However, no patent will be granted on an application in connection with which fraud on the Office was practiced or attempted or the duty of disclosure was violated through bad faith or intentional misconduct. The office encourages applicants to carefully examine:

(1) prior art cited in search reports of a foreign patent office in a counterpart application, and

(2) the closest information over which individuals associated with the filing or prosecution of a patent application believe any pending claim patentably defines, to make sure that any material information contained therein is disclosed to the Office.

(b) Under this section, information is material to patentability when it is not cumulative to information already of record or being made of record in the application, and

(1) It establishes, by itself or in combination with other information, a *prima facie* case of unpatentability of a claim; or

(2) It refutes, or is inconsistent with, a position the applicant takes in:

(i) Opposing an argument of unpatentability relied on by the Office, or

(ii) Asserting an argument of patentability.

A *prima facie* case of unpatentability is established when the information compels a conclusion that a claim is unpatentable under the preponderance of evidence, burden-of-proof standard, giving each term in the claim its broadest reasonable construction consistent with the specification, and before any consideration is given to evidence which may be submitted in an attempt to establish a contrary conclusion of patentability.

(c) Individuals associated with the filing or prosecution of a patent application within the meaning of this section are:

(1) Each inventor named in the application;

(2) Each attorney or agent who prepares or prosecutes the application; and

(3) Each other person who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application.

(d) Individuals other than the attorney, agent or inventor may comply with this section by disclosing information to the attorney, agent or inventor.